

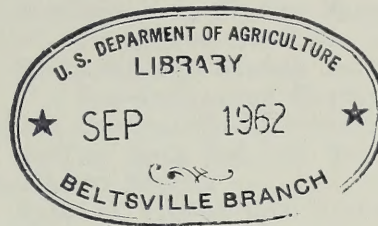
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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
Field Crops Research Branch

(NOT FOR PUBLICATION) 1/



RESULTS FROM THE NATIONAL COOPERATIVE COORDINATED
OAT BREEDING NURSERIES FOR 1954

Compiled by Franklin A. Coffman, H. C. Murphy, and Harland Stevens

1/ This is a progress report of cooperative investigations containing data, the interpretation of which may be modified with additional experimentation. Publication, display, or distribution of any data or any statements herein is prohibited without prior written approval of the Field Crops Research Branch, ARS, USDA, and the cooperating agency or agencies concerned.

Plant Industry Station
Beltsville, Maryland
336CC--January, 1955

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
Field Crops Research Branch

(NOT FOR PUBLICATION)

RESULTS FROM THE NATIONAL COOPERATIVE COORDINATED OAT BREEDING NURSERIES FOR 1954

Compiled by Franklin A. Coffman, Senior Agronomist, Oat Investigations,
H. C. Murphy, Principal Pathologist in Charge of Oat Investigations,
and Harland Stevens, Agronomist ^{1/}

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INTRODUCTION

The year, 1954, marks the 31st year in which the National Cooperative Coordinated Oat Breeding Nursery Program has been conducted. The early history of the program was reported in the National Oat Newsletter Vol. III appearing early in 1953. No complete summary of data compiled through the years has ever been published but a few summaries of some of the data have been assembled.

For purposes of assembling data on these nurseries, the country is divided into five regions and seven yield nurseries are being conducted. The regions are the Northeastern, North Central, Northwestern, South Central-Southwestern, and Southern. Data from Alaska are also included. H. C. Murphy is in charge of the North Central Region, Harland Stevens in charge of the Northwestern and Alaska, and F. A. Coffman is responsible for the reports from the other regions.

At present one nursery is grown in each of the three northern regions, although data are assembled separately from irrigated and non-irrigated stations in the Northwest. Two nurseries are conducted exclusively in the Southern Region, and two additional nurseries, the Spring Sown Red Oat Nursery and the Special Winter Oat Nursery, are conducted at at least a few points in all regions. The Northwestern Nursery also is grown in Alaska. Data from a total of 112 points in 43 states and Alaska are included.

As in previous years, the report includes a summary of data from the Uniform Winter Hardiness Nursery although complete data on that nursery were previously reported to those who cooperate in conducting it.

In this report no attempt has been made to present results of previous years experiments, although a summary table for 1954 precedes the presentation of data on each nursery. One new feature is a table in each discussion in which are assembled data on the entries included in 1954. The complete source and history of the entries is not attempted but the station most interested in having the variety or selection included or the one supplying the original seed for including the entry is listed.

^{1/} Credit is due Eugenia M. Likens for assistance in all the different phases of compiling the data and text and in making the calculations; to Joyce Marable for final preparation of the major portion of the text and tables compiled; to Charlotte V. Singleton who assisted in preparing data from several regions; to Lois Bowman and Mary Quinn for assisting in preparing the report on the North Central Region; and to Esther Becker for assistance in preparing the report on the Northwestern Region.

KEY TO MAP AND INDEX TO DATA

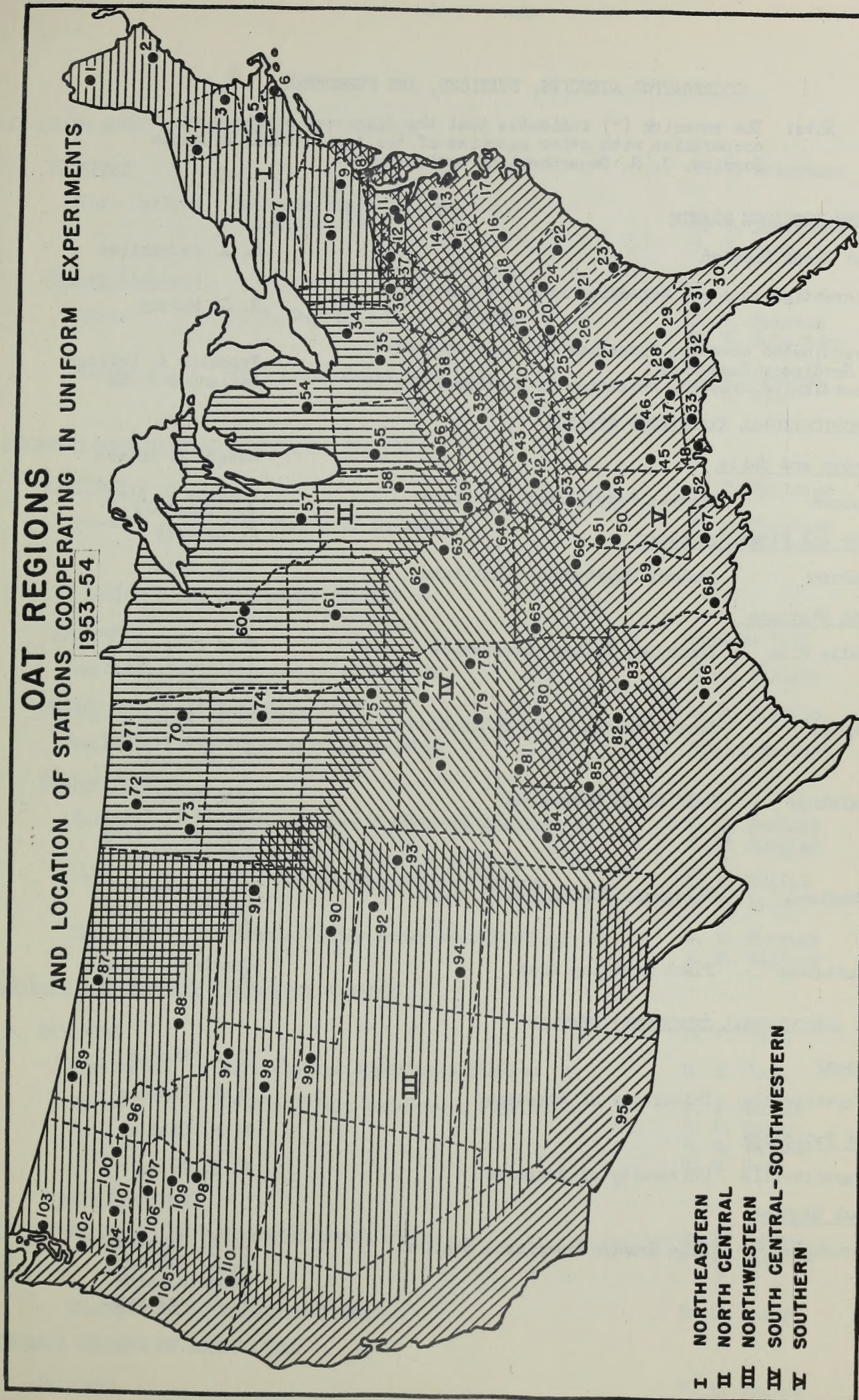
No. on Map	State	Station	Page Nos.	No. on Map	State	Station	Page Nos.
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28		Thomasville, 107		83		Greenville, 123	
29		Tifton, 88, 107		84		Amarillo, 123	
30	Fla.	Gainesville, 88, 107		85		Chillicothe, 73	
31		Live Oak, 107		86		College Station, 88, 107	
32		Quincy, 88, 107		87	Mont.	Havre, 52	
33		Jay, 88, 107		88		Bozeman, 41	
34	Ohio	Wooster, 25		89		Creston, 52	
35		Columbus, 25, 59, 123		90	Wyo.	Laramie, 41	
36	W. Va.	Morgantown, 15, 123		91		Sheridan, 52	
37		Wardensville		92	Colo.	Ft. Collins, 41	
38	Ky.	Lexington, 59, 73, 123		93		Akron, 59	
39		Hopkinsville, 88		94		Hesperus, 41	
40	Tenn.	Knoxville, 73, 123		95	Ariz.	Tucson, 59	
41		Crossville, 123		96	Ida.	Moscow, 52	
42		Jackson, 123		97		Tetonia, 52	
43		Columbia, 123		98		Aberdeen, 15, 25, 41, 59, 73, 88, 107, 123	
44	Ala.	Belle Mina, 88, 107		99	Utah	Logan, 41	
45		Camden, 88, 107		100	Wash.	Pullman, 52	
46		Tallassee, 88, 107		101		Prosser, 41	
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OAT REGIONS

AND LOCATION OF STATIONS COOPERATING IN UNIFORM EXPERIMENTS
1953-54



COOPERATING AGENCIES, STATIONS, AND PERSONNEL

Note: The asterisk (*) indicates that the data were obtained in cooperation with other agencies of the Agricultural Research Service, U. S. Department of Agriculture.

FIELD CROPS RESEARCH BRANCH

Cereal Crops Section	H. A. Rodenhiser
Oat Investigations and Nurseries in North Central Region	H. C. Murphy
Coordinated Breeding Nurseries and Uniform Winter Hardiness Nurseries	Franklin A. Coffman
Coordinated Breeding Nurseries in Northwest Region	Harland Stevens

ALABAMA AGRICULTURAL EXPERIMENT STATION

<u>Agronomy and Soils</u>	Howard T. Rogers
Auburn Alabama Polytechnic Institute	Charles C. King Foy Campbell
<u>Botany and Plant Pathology</u>	J. L. Seal
Auburn Alabama Polytechnic Institute	J. A. Lyle
<u>Branch Stations</u>	
Belle Mina Tennessee Valley Substation	Fred Stewart Charles C. King Foy Campbell
Camden Lower Coastal Plain Substation	V. L. Brown Charles C. King Foy Campbell
Fairhope Gulf Coast Substation	Otto Brown Harold F. Yates Charles C. King Foy Campbell
Headland Wiregrass Substation	C. A. Brogden Charles C. King Foy Campbell
Tallassee Plant Breeding Area	Charles C. King Foy Campbell

ARKANSAS AGRICULTURAL EXPERIMENT STATION

<u>Agronomy</u>	D. A. Hinkle
Fayetteville University of Arkansas	R. L. Thurman
<u>Plant Pathology</u>	E. M. Cralley
Fayetteville University of Arkansas	H. R. Rosen
<u>Branch Station</u>	
Stuttgart Rice Branch Experiment Station	J. N. Campbell R. L. Thurman Kenneth Smith T. H. Johnston

COLORADO AGRICULTURAL EXPERIMENT STATION

Agronomy

Fort Collins Colorado State College of
Agriculture

D. W. Robertson

D. W. Robertson
T. E. Haus

Branch Stations

*Akron U. S. Dry Land Field Station

J. F. Brandon
D. W. Robertson

Hesperus Fort Lewis Substation

A. E. Corfman
H. O. Mann

DELAWARE AGRICULTURAL EXPERIMENT STATION

Agronomy

Newark University of Delaware

C. E. Phillips

F. B. Springer
F. B. Collins

FLORIDA AGRICULTURAL EXPERIMENT STATION

Agronomy

Gainesville University of Florida

Fred H. Hull

A. T. Wallace

Botany and Plant Pathology

Gainesville University of Florida

W. B. Tisdale

Robert Earhart

Branch Stations

Quincy North Florida Experiment Station

W. C. Rhoades
W. H. Chapman

Jay West Florida Experiment Station

C. E. Hutton
H. W. Lundy

Live Oak Suwanee Valley Experiment Station

G. E. Ritchey
A. T. Wallace

GEORGIA AGRICULTURAL EXPERIMENT STATION

Agronomy

Experiment Agricultural Experiment Station

S. V. Stacy

U. R. Gore

Tifton Coastal Plain Experiment Station

G. W. Burton
D. D. Morey
S. A. Parham
U. R. Gore

Branch Stations

Blairsville Mountain Branch Station

J. E. Bailey
U. R. Gore

Thomasville Greenwood Farms

D. D. Morey

GEORGIA COLLEGE OF AGRICULTURE

Agronomy

Athens University of Georgia

T. H. Rogers

Acton R. Brown

IDAHO AGRICULTURAL EXPERIMENT STATION

Agronomy

Moscow University of Idaho

K. H. Klages

W. K. Pope

Branch Stations

Aberdeen Branch Experiment Station

R. D. Ensign
Harland Stevens
Frank C. Petr

Sandpoint Branch Experiment Station

C. T. Brackney

Tetonia High Altitude Branch Experiment
(St. Anthony) Station

Hugh C. McKay

ILLINOIS AGRICULTURAL EXPERIMENT STATION

Agronomy

Urbana University of Illinois

M. B. Russell

C. M. Brown
O. T. Bonnett
Wayne M. Bever
R. M. Takeshita

Branch Stations

Carbondale Horticultural Experiment Station

C. M. Brown
Ed. F. Sullivan

INDIANA AGRICULTURAL EXPERIMENT STATION

Agronomy

Lafayette Purdue University

J. B. Peterson

F. L. Patterson

Botany

Lafayette Purdue University

J. R. Shay

R. M. Caldwell
J. F. Schafer
L. E. Compton

Branch Stations

Princeton Frank MacRobert's Farm

R. M. Caldwell
L. E. Compton
J. F. Schafer
F. L. Patterson

IOWA AGRICULTURAL EXPERIMENT STATION

Agronomy

Farm Crops

W. H. Pierre

I. J. Johnson

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K. J. Frey
H. C. Murphy
R. E. Atkins
S. W. Wiggans

Botany and Plant Pathology

Ames Iowa State College

W. H. Bragonier

J. A. Browning
H. C. Murphy
M. D. Simons

KANSAS AGRICULTURAL EXPERIMENT STATION

Agronomy

Manhattan Kansas State College

Botany and Plant Pathology

Manhattan Kansas State College

Branch Stations

Hays Ft. Hays Branch Experiment Station

Kingman Hutchinson Field

Mound Valley Branch Experiment Station

R. V. Olson

E. G. Heyne
W. L. Fowler

S. M. Pady

C. O. Johnston
E. D. Hansing
W. C. Haskett

W. W. Duitsman
W. M. Ross
E. G. Heyne
Walter Moore
E. G. Heyne
Lloyd Jones

KENTUCKY AGRICULTURAL EXPERIMENT STATION

Agronomy

Lexington University of Kentucky

Branch Stations

Hopkinsville William G. Duncan's Farm

G. T. Webster

V. C. Finkner
David A. Reid

James F. Shane
David A. Reid

LOUISIANA AGRICULTURAL EXPERIMENT STATION

Agronomy

Breeding Projects

Baton Rouge Louisiana State University

Branch Stations

Crowley Rice Experiment Station

St. Joseph Northeast Louisiana Station

M. B. Sturgis

M. T. Henderson

J. P. Gray

R. K. Walker
N. E. Jodon

C. B. Haddon
J. A. Hendrix
J. P. Gray

MAINE AGRICULTURAL EXPERIMENT STATION

Agronomy

Orono College of Agriculture

Branch Stations

Presque Isle Aroostook Farm

J. E. Livingston

L. H. Taylor

R. M. Cobb
L. H. Taylor

MARYLAND AGRICULTURAL EXPERIMENT STATION

Agronomy

College Park University of Maryland

A. O. Kuhn

R. G. Rothgeb

BELTSVILLE, MARYLAND, AGRICULTURAL RESEARCH SERVICE

Beltsville Cereal Crops Section --- Oats

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W. Q. Loegering
Clemmer Marcus
Rowland Geis
Harry Marshall

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Agronomy

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W. G. Colby

W. G. Colby

MASSACHUSETTS, WEST SPRINGFIELD

Feeding Hills Eastern States Farmer's Exchange

E. K. Walrath
I. K. Bessalaw
W. A. Rosenau

MICHIGAN AGRICULTURAL EXPERIMENT STATION

Farm Crops

East Lansing State College of Agriculture and
Applied Science

K. T. Payne

John Grafius

Botany and Plant Pathology

East Lansing State College of Agriculture and
Applied Science

W. B. Drew

R. C. Kiesling

MINNESOTA AGRICULTURAL EXPERIMENT STATION

Agronomy and Plant Genetics

St. Paul University of Minnesota

W. M. Myers

W. M. Myers
Francis K. S. Koo

Botany and Plant Pathology

St. Paul University of Minnesota

J. J. Christensen

M. B. Moore
B. J. Roberts

MISSISSIPPI AGRICULTURAL EXPERIMENT STATION

Plant Pathology and Physiology Mississippi State College

S. S. Ivanoff *

Branch Stations

Stoneville Delta Branch Experiment Station

W. L. Giles
Donald Bowman

Poplarville South Mississippi Branch Station

T. E. Ashley
S. S. Ivanoff

Holly Springs North Mississippi Branch Station

S. P. Crockett
S. S. Ivanoff

MISSISSIPPI, STONEVILLE

Stoneville Stoneville Pedigreed Seed Company

George R. Walker
C. W. Manning

MISSOURI AGRICULTURAL EXPERIMENT STATION

Field Crops

Columbia University of Missouri

W. C. Etheridge

J. M. Poehlman
M. E. Michaelson

* Ivanoff is included in the Plant Pathology Dept., although /
conducting experiments in agronomy as indicated.

MISSOURI AGRICULTURAL EXPERIMENT STATION (continued)

Branch Stations

Pierce City

Carl Hayward
J. M. Poehlman

Sikeston

Norman Brown
J. M. Poehlman

MONTANA AGRICULTURAL EXPERIMENT STATION

Agronomy

Bozeman Montana State College

A. H. Post

R. F. Eslick
Howard Rhoades

Branch Stations

Havre North Montana Branch Station

J. J. Sturm
Lawrence O. Baker

Moccasin Central Montana Branch Station

R. M. Williams
Howard Rhoades
J. L. Krall

Creston Northwestern Montana Branch Station

Vern Stewart

NEBRASKA AGRICULTURAL EXPERIMENT STATION

Agronomy

Lincoln University of Nebraska

E. F. Frolik

L. P. Reitz
Karl Kaukis
John W. Schmidt

NEW HAMPSHIRE AGRICULTURAL EXPERIMENT STATION

Agronomy

Durham University of New Hampshire

R. L. Donahue

L. J. Higgins

NEW YORK AGRICULTURAL EXPERIMENT STATION

Plant Breeding

Ithaca Cornell University

R. P. Murphy

Neal F. Jensen

Plant Pathology

Ithaca Cornell University

G. C. Kent

L. J. Tyler

NORTH CAROLINA AGRICULTURAL EXPERIMENT STATION

Agronomy

Agronomy (Field Crops)

Raleigh University of North Carolina

E. T. York

G. K. Middleton

G. K. Middleton

Plant Pathology

Raleigh University of North Carolina

J. H. Jensen

T. T. Hebert
John Moseman

Branch Stations

Apex McCullers Branch Station

W. C. Allsbrook
G. K. Middleton
T. T. Hebert

Waynesville Mountain Branch Station

Ray Whisenhunt
G. K. Middleton
T. T. Hebert

NORTH CAROLINA AGRICULTURAL EXPERIMENT STATION (continued)

Statesville Piedmont Branch Station

J. W. Hendricks
G. K. Middleton
T. T. Hebert

Plymouth Tidewater Branch Station

J. L. Rea
G. K. Middleton
T. T. Hebert

NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agronomy

Fargo North Dakota Agricultural College

T. E. Stoa

Langdon Langdon Substation

G. S. Smith

Dickinson Dickinson Substation

V. Sturlaugson
G. S. Smith

Minot North Central Substation

R. J. Douglas
T. J. Conlon

G. N. Geiszler
K. L. Lebsock

OHIO AGRICULTURAL EXPERIMENT STATION

Agronomy

Wooster Ohio Agricultural Experiment Station

G. W. Volk

C. A. Lamb
Verne Finkner

Branch Station

Columbus Ohio State University

C. A. Lamb
Verne Finkner

OKLAHOMA AGRICULTURAL EXPERIMENT STATION

Agronomy

Stillwater Oklahoma Agricultural and Mechanical
College

H. F. Murphy

A. M. Schlehuber
Byrd C. Curtis

Botany and Plant Pathology

Stillwater Oklahoma Agricultural and Mechanical
College

W. W. Hansen

H. C. Young

Branch Stations

*Woodward Southern Great Plains Field Station

R. A. Hunter
A. M. Schlehuber

OREGON AGRICULTURAL EXPERIMENT STATION

Farm Crops

Corvallis Oregon State College

D. D. Hill

R. E. Fore
W. E. Foote
Tom Weblen

Branch Stations

Moro Sherman Branch Experiment Station

W. E. Hall

Ontario Malheur Experimental Area

E. N. Hoffman

*Pendleton Pendleton Branch Experiment Station

M. M. Oveson
C. R. Rohde

OREGON AGRICULTURAL EXPERIMENT STATION (continued)

Klamath Falls Klamath Experimental Area
Union Eastern Oregon Branch Station

A. E. Gross
H. G. Avery
G. R. Crowley

PENNSYLVANIA AGRICULTURAL EXPERIMENT STATION

Agronomy

State College Pennsylvania State College

H. B. Sprague
C. S. Bryner

Branch Stations

Landisville

C. S. Bryner

RHODE ISLAND AGRICULTURAL EXPERIMENT STATION

Agronomy

Kingston University of Rhode Island

T. E. Odland
R. S. Bell

SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION

Agronomy

Clemson Clemson Agricultural College

W. R. Paden
W. R. Paden
E. B. Eskew

Branch Stations

Blackville Edisto Experiment Station

W. B. Rogers

SOUTH CAROLINA, HARTSVILLE

Hartsville Coker's Pedigreed Seed Co.

Robert Coker
J. Winston Neely
S. J. Hadden

Branch Station Farms

Yemassee Coker's Pedigreed Seed Co.

S. J. Hadden

Chester Coker's Pedigreed Seed Co.

S. J. Hadden

SOUTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agronomy

Brookings South Dakota State College

W. W. Worzella
V. A. Dirks

TENNESSEE AGRICULTURAL EXPERIMENT STATION

Agronomy

Knoxville University of Tennessee

Eric Winters
N. I. Hancock

Branch Stations

Crossville Plateau Experiment Station

J. A. Odom
N. I. Hancock

Jackson West Tennessee Experiment Station

B. P. Hazelwood
N. I. Hancock

Columbia Middle Tennessee Experiment Station

E. J. Chapman
N. I. Hancock

* Hancock is included in Botany Dept., although conducting agronomic experiments as indicated.

TEXAS AGRICULTURAL EXPERIMENT STATION

Agronomy (Corn and Small Grains)

College Station Agricultural and Mechanical
College of Texas

J. E. Adams

E. S. McFadden
G. W. Rivers

Branch Stations

Denton Substation No. 6

D. I. Dudley
I. M. Atkins
J. H. Gardenhire
D. E. Weibel

*Greenville Cotton Field Station

D. D. Porter

Amarillo Soil Conservation Investigations

K. B. Porter

UTAH AGRICULTURAL EXPERIMENT STATION

Agronomy

Logan Utah State Agricultural College

D. W. Thorne

R. W. Woodward

VERMONT AGRICULTURAL EXPERIMENT STATION

Agronomy

Burlington University of Vermont

A. R. Midgley

K. E. Varney
T. R. Flanagan

VIRGINIA AGRICULTURAL EXPERIMENT STATION

Agronomy

Blacksburg Virginia Polytechnic Institute

H. L. Dunton

T. M. Starling

Plant Pathology and Physiology

Blacksburg Virginia Polytechnic Institute

S. A. Wingard

C. W. Roane

Branch Stations

Staunton Shenandoah Valley Field Station

P. T. Gish
T. M. Starling

Warsaw Eastern Virginia Field Station

H. M. Camper
T. M. Starling
C. W. Roane

WASHINGTON AGRICULTURAL EXPERIMENT STATION

Agronomy

Pullman State College of Washington

B. R. Bertramson

S. P. Swenson
F. C. Elliott

Plant Pathology

Pullman State College of Washington

G. W. Fischer

C. S. Holton

Branch Stations

Prosser Irrigated Experiment Station

H. P. Singleton
R. W. VanKeuren

Puyallup Western Washington Experiment Station

D. R. Peterson

Mt. Vernon Northwestern Washington Experiment
Station

M. W. Carstens
Corwin Johnson

WASHINGTON AGRICULTURAL EXPERIMENT STATION (continued)

Vancouver	Southwestern Washington Experiment Station	R. H. Griffin
-----------	--	---------------

WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION

Agronomy and Genetics

Morgantown	West Virginia University	G. G. Pohlman
------------	--------------------------	---------------

Collins Veatch

Plant Pathology

J. G. Leach

Morgantown	West Virginia University
------------	--------------------------

E. S. Elliott

Branch Stations

Wardensville	Reymann Memorial Farms
--------------	------------------------

C. J. Cunningham
Collins Veatch

WISCONSIN AGRICULTURAL EXPERIMENT STATION

Agronomy

Madison	University of Wisconsin
---------	-------------------------

D. C. Smith

H. L. Shands

WYOMING AGRICULTURAL EXPERIMENT STATION

Agronomy

Laramie	University of Wyoming
---------	-----------------------

D. W. Bohmont

R. P. Pfeifer

ALASKA AGRICULTURAL EXPERIMENT STATION

Agronomy

Palmer	University of Alaska
--------	----------------------

H. J. Hodgson

R. L. Taylor

Branch Station

Fairbanks	Agricultural Experiment Station
-----------	---------------------------------

R. L. Taylor

THE NATIONAL COOPERATIVE COORDINATED OAT BREEDING NURSERY

The yields of oats in 1954 indicate the season to be one of the most generally favorable in recent years. The oat crop is estimated at about one and a half billion bushels. With the national population increasing at such a rapid rate, expansion of our grain crops is necessary if we are to maintain food and feed supplies adequate for maintaining our increased populations. Oats are this country's third most important grain crop, and in general grain crops occupy some 60 percent of our cropped area and contribute nearly 50 percent of our farm income from all crops grown.

The season generally was favorable in most areas. Winter weather was not exceptionally severe, although more winter killing was observed than in the previous year. Spring and summer conditions were generally favorable, although rust took a sizeable toll in some areas and septoria was prevalent and detrimental to crop production in others. It would appear that some diseases formerly considered of minor importance may be more destructive than previously considered. Septoria is one such, but there are others.

In 1954 cooperative yield and hardiness nurseries were seeded on a total of 110 stations in 43 states and at two points in Alaska. In this report data are assembled from the different oat-growing regions of the United States and Alaska. Data from each experiment are reported more or less by Regions and are discussed separately.

NORTHEASTERN REGION

Spring oats far exceed winter oats in importance in this region, but the growing of oats from fall seeding is on the increase. Excellent yields usually are obtained when winter oats survive. Spring oats of the midseason type are grown almost exclusively in the northern areas and winter oats almost exclusively in the southern part of the Northeastern Region.

The winter of 1953-54 was rather mild, and survivals of the hardier varieties of winter oats were comparatively good on most stations. The good yields in the area were rather surprising since the fall of 1953 was so dry that emergence of fall-seeded oats was very slow and uneven. Data on the fall-sown oat experiments in the region are presented along with those in the Southern Section of this report.

The season was not especially favorable in areas where spring-sown oats are grown. Oats were seeded late at some points; and excessive rainfall, especially in New England, resulted in the spread of diseases such as Septoria. In Maryland dry weather hastened maturity and cut yields somewhat. This resulted in poor test weights. Only one spring sown nursery is grown in the region. Data are included in Tables 1 to 8, inclusive.

Uniform Northeastern States Oat Nursery

This nursery was seeded on nine stations in 1954. Two nurseries were grown at Feeding Hills, Mass.; one was early, and the other was late sown. Stations cooperating were as follows:

Me.	Presque Isle	Md.	Beltsville
	Orono	N. Y.	Ithaca
N. H.	Durham	Penna.	State College
Vt.	Burlington	W. Va.	Morgantown
Mass.	Feeding Hills (Early Sown)		
	Feeding Hills (Late Sown)		

In addition to the above, an observational nursery was grown at Aberdeen, Idaho, and entries in this nursery were grown at Ames, Iowa, in disease tests.

The entries in the Beltsville, Md., nursery were grown partly for observation; hence the data are presented in the tables and not included in the average.

Yield, Bushels per Acre

Yields in this experiment averaged better in 1954 than in 1953. A total of ten entries averaged more than 60 bushels per acre. The highest yielding entries, Garry Selection and Improved Garry, both averaged 67.3 bushels per acre. Tama, the check variety for indicating the presence of *H. victoriae*, yielded least, 43.6 bushels per acre. Most of the better adapted varieties averaged above 55 bushels per acre.

Test Weight

Data on test weight were received from seven stations. Test weights were high at Presque Isle and Orono but much lower elsewhere. The highest average test weights were recorded for Waubay, C. I. 6641, Clintland, and Clarion, which averaged 33.5 pounds per bushel or higher. The lightest testing entry was Abegweit which tested below 29 pounds per bushel. Several others tested between 29 and 30 pounds. On the average, test weights in this area in 1954 were below those in 1953.

Plant Height

Data on plant height were received from seven stations. A few entries averaged in excess of 42 inches tall, and only Tama and C. I. 5319 averaged under three feet. They averaged 34.9 and 33.0 inches, respectively. The tallest oat in 1954 was Roxton which averaged 48 inches. This is a tall variety, since Victory averaged only 43.6 inches in 1954.

Standing Ability

A total of six stations reported data on lodging. Lodging varied in different entries at different points. It was most severe at Presque Isle and least at Feeding Hills, Mass. On the average, the stiffest strawed entries in 1954 were Clinton "59", Clintland, Mohawk, Waubay, and C. I. 6913, which lodged only 2.0, 4.5, 4.8, 5.5, and 5.7 percent, respectively. C. I. 6646, C. I. 6943, and C. I. 6932 all lodged more than 50 percent on the six stations reporting.

Date Headed

Data on date headed were recorded at eight stations although the average included data from only six points. On the average, all oats headed in early July except Mo. O-205, C. I. Nos. 6913 and 6765, which headed in late June. Roxton and Victory, the latest entries headed July 10.

Date Ripe

Data on date ripe were received from only two nurseries other than the one at Beltsville, Md., in 1954. These were the early and the late seeded nurseries at Feeding Hills, Mass. A two-nursery average merits little discussion but of the entries included Roxton and Victory were the last to mature. There was close to three weeks between the first and last to ripen.

Straw and Forage

Data on straw yields were received from Durham, N. H., and on forage yields from Feeding Hills, Mass. The entry with the highest straw yield was Garry Selection, whereas the highest forage yield was recorded for C. I. 6938.

Disease Resistance

Data on the reaction to disease of entries in the Uniform Northeastern States Nursery were received from five stations in the Region and from greenhouse and field nursery tests at Ames, Iowa. At Ames data on crown rust resistance on field-grown oats indicated that of those on which data were recorded Clintafe, Clintland, and Simcoe were most resistant. In greenhouse seedings where crown rust race 202 was used as inoculum only Clintland and C. I. 6765 received zero readings and of the others only Tama was resistant.

Data on stem rust were received from Ames, Iowa, in the field and greenhouse, and from Burlington, Vt., and Aurora, N. Y., in the field. These data indicate that only Improved Garry was resistant in all tests. In greenhouse tests at Ames where stem rust races 6, 7, 7A, and 8 were used as inoculum, Rodney and C. I. 6765 were resistant to 7 but not 7A. All other entries resistant to 7 were not resistant to 8 and vice versa. Craig was susceptible to all four races. At Burlington, Victory was among the most susceptible and C. I. 6939 was most nearly free of stem rust. Improved Garry and Fortune were not infected at Aurora.

Data on smut infection were received from four nurseries. Shefford was most seriously infected of all entries. Septoria was reported from Presque Isle. Infections were high in many entries but somewhat higher in Clarion, C. I. 5319, and C. I. 6765 than in the others. Abegweit and C. I. 6932 were least affected. Data on red leaf were obtained at Beltsville. The most seriously affected varieties were Shelby and Tama.

Table 1 . Entries included in the Uniform Northeastern States Nursery grown in 1954.

C. I. No.	Variety or Hybrid	Selection	Seed Source 1/
560	Victory (old check)	35-548	Check
3502	Tama (H. victorise check)	Canada	Check
4134	Roxton: (Siberian x Joannette) x (O.A.C. x Early Ripe)	R.L.1114	Canada
4157	Ajax: Victory x Hajira	XM 3218-35-1335-3-10	"
4259	Clinton 59 (check)	1307-9	Check
4327	Mohawk (check)	36-1112-7-9	Check
4372	Shelby (midseason check)	Canada	"
4521	Beaver: Vanguard x Erban	C.A.N. 693	Canada
4970	Abegweit: Vanguard x Erban	Mo. 04205	Canada
4988	Mo. 0-205: Columbia x (Victoria-Richland)	Winnipeg O.T. 300	Missouri
5226	Fortune: Victory x (Victoria-Richland x Bannock)	Ab.Series C 183	Canada
5319	Fulton x Clinton	N.Y. 526al-14-9-9 Sel. 77	W. Va.
5332	Craig: Ithacan x Victoria	Ida. B-173-2850	N. Y.
5440	Waubay: Clinton x Marion	Ida. B-196-3006	S.D.
5441	Jackson: Clinton x Marion	Resel. B194-9	Iowa
5647	Clarion: Clinton x Marion	117-1 Ab. 93	Me.
5869	Clintonafe: Clinton ₂ x Santa Fe	Minn. II-43-26	Iowa
5942	Bond-Reinbow x Hajira-Joannette	Wis. X345-1	W. Va.
5946	Sauk: (Forward x Victoria-Richland) x Andrew	Ind. A422Al-48-3-2	Ind.
6641	(Clinton-Boone) x Cartier	Ab. 3726-1	Ind.
6646	Clinton x Santa Fe	RL. 1692.27	Md.
6648	Garry Selection: Victory x (Victoria x Hajira-Banner)	RL. 2123 OT 130	Canada
6661	Rodney: (Victoria x Hajira-Banner) x Roxton	RL. 1692.27 OT 139	"
6662	Improved Garry: Victory x (Victoria x Hajira-Banner)	B4916A3-4	Ind.
6701	Clintonland: Landhafer x Clinton ₄	Minn. II-46-3	Minn.
6765	Landhafer x (Mindo x Hajira-Joannette)	Canada	Ind.
6767	Simcoe: Ajax x Erban	Minn. II-47-25	Canada
6913	(Bond-Reinbow x Hajira-Joannette) x Landhafer	Ind. 422Al-48-3-2-20	Minn.
6932	(Clinton-Boone) x Cartier	Wis. X304-8	Ind.
6938	Forward ₂ x (Victoria-Richland)	Wis. X342-1-1	Wis.
6939	RL.1273 x Spooner	N.Y.Sel. 611B-176-9	Wis.
6940	New York Selection: Goldwin x Clinton	Canada	N.Y.
6941	Shefford: Roxton x Mabel	Ab.Sel.3614-1	Canada
6942	Zephyr x Santa Fe	Ab.Sel.3638-7	Md.
6943	"	Ab.Sel.3692-5	Md.
6944	Bonda x Santa Fe		Md.

1/ The U. S. D. A. and in certain cases additional states cooperated in the production of many of these oats.

Table 2 . Summary of data obtained on the Uniform Northeastern States Oat Experiment grown in 1954.

Rank in Yield	C. I. No.	Variety or Selection	Acre Yield (9 Sta) Bu.	Test Wt. (7 Sta) Lbs.	Plant Ht. (7 Sta) Ins.	Lodg- ing (5 Sta) o/o	Date Head (6 Sta)
1	6648	Garry Selection	67.3	31.9	41.4	18.2	7/4
2	6662	Improved Garry	67.3	30.8	42.7	17.3	5
3	6767	Simcoe:Ajax x Erban	65.0	30.4	44.4	20.8	5
4	6939	R.L.1273 x Spooner	62.8	33.4	41.4	14.0	4
5	4157	Ajax	62.3	30.1	43.0	30.2	5
6	6940	New York Sel. 611B-176-9	62.2	30.6	41.1	14.7	7
7	5226	Fortune	62.0	29.4	42.9	33.8	7
8	4970	Abegweit	61.4	28.9	40.1	8.7	6
9	6641	(Clinton-Boone) x Cartier	61.2	33.6	39.7	42.0	5
10	5332	Craig	60.8	29.7	35.6	21.7	6
11	5946	Sank	60.0	31.2	39.1	7.8	5
12	4988	Mo. O-205	59.9	33.4	39.6	33.3	6/30
13	4521	Beaver	59.9	30.4	42.7	29.7	7/4
14	6661	Rodney	59.6	32.8	41.4	18.8	8
15	5441	Clinton x Marion	59.3	32.6	39.6	31.0	4
16	5647	Clarion	58.6	33.5	38.4	9.2	2
17	6938	Forward 2 x (Victoria-Richland)	58.2	32.6	41.1	27.0	7
18	4372	Shelby (check)	57.9	32.8	39.4	9.5	5
19	6932	(Clinton-Boone) x Cartier	56.9	32.1	39.3	52.0	6
20	4327	Mohawk (check)	56.2	33.6	37.3	4.8	3
21	5942	Bond-Rainbow x Hajira-Joanette	56.0	33.3	38.9	12.5	1
22	6765	Landhafer x (Mindo x Haj-Joan.)	55.9	29.6	38.9	23.3	6/28
23	6941	Shefford	55.4	29.9	41.9	31.3	7/2
24	5319	Fulton x Clinton	55.1	32.3	33.0	18.3	3
25	6913	(Bond-Rain. x Haj-Joan) x Land.	54.9	33.3	38.9	5.7	6/30
26	5869	Clintafe	54.8	33.4	38.0	10.8	7/6
27	4259	Clinton 59 (check)	54.7	33.1	36.4	2.0	2
28	5440	Waubay: Clinton x Marion	54.5	33.7	38.0	5.5	2
29	6701	Clintonland	53.5	33.6	36.0	4.5	1
30	6942	Zephyr x Santa Fe	52.1	31.2	37.3	19.5	3
31	6646	Clinton x Santa Fe	51.3	33.1	39.4	56.0	1
32	560	Victory (old check)	49.9	30.6	43.6	8.3	10
33	4134	Roxton	49.4	31.6	48.0	6.3	10
34	6944	Bonda x Santa Fe	46.6	29.5	41.3	22.5	4
35	6943	Zephyr x Santa Fe	46.0	31.8	39.4	55.8	1
36	3502	Tema (check)	43.6	29.6	34.9	28.3	3

Table 3 . Yields on stations reporting of varieties and hybrid selections included in the Uniform Northeastern States Oat Experiment

grown in 1954

C. I. No.	Variety or Selection	Average Stations	Presque Isle, Maine	Orono, Maine	Durham, N. H.	Burlington, Vt.	Feeding Hills, Mass. (Early)	Feeding Hills, Mass. (Late)	Ithaca, N. Y.	State College, Pa.	Morgantown, W. Va.	Beltsville, Md. 1/
Bushels												
6648	Garry Selection	67.3	72.7	72.9	42.4	52.5	68.6	50.0	110.1	47.2	89.2	50.7 ^{2/}
6662	Improved Garry	67.3	76.5	80.3	31.8	52.0	64.6	50.2	111.2	53.1	86.2	54.9
6767	Simcoe	65.0	61.1	61.4	34.6	41.5	84.6	55.5	106.0	57.6	82.6	52.8
6939	RL 1273 x Spooner	62.8	51.9	67.6	27.9	50.4	73.9	56.9	100.1	48.2	88.4	59.4
4157	Ajax	62.3	58.3	63.7	34.1	35.8	76.6	54.4	104.4	53.7	79.9	48.3
6940	New York Selection	62.2	56.3	67.8	46.7	33.1	72.1	44.7	118.7	54.0	66.4	41.7
5226	Fortune	62.0	59.1	66.1	43.6	29.8	77.3	53.9	96.5	57.4	74.6	42.3
4970	Abegeweit	61.4	64.9	65.8	42.0	38.0	81.0	42.6	92.4	51.1	75.0	31.8
6641	(Clinton-Boone) x Cartier	61.2	44.6	69.1	40.9	32.4	72.7	42.4	117.5	47.8	83.6	48.6
5332	Craig	60.8	59.6	75.0	22.9	28.3	67.4	50.4	92.0	55.6	91.5	44.4
5946	Sauk	60.0	48.2	61.1	33.1	33.6	80.1	60.4	92.0	55.0	76.7	43.2
4988	Mo. O-205	59.9	55.0	53.2	30.2	23.8	79.3	59.7	93.1	56.8	87.7	54.6
4521	Beaver	59.9	61.6	57.0	34.0	36.8	73.3	50.9	91.8	54.9	78.4	47.4
6661	Rodney	59.6	51.2	63.1	17.4	44.5	76.5	41.5	111.5	54.4	76.7	43.8
5441	Clinton x Marion	59.3	62.8	59.9	29.3	29.6	78.1	60.0	82.1	45.4	86.5	45.9
5647	Clarion	58.6	51.7	60.0	23.9	31.8	67.8	57.6	82.9	55.7	95.6	50.1
6938	Forward ² x (Victoria-Richland)	58.2	53.5	66.7	36.9	32.3	68.2	35.3	114.8	49.8	66.3	44.7
4372	Shelby (midseason check)	57.9	41.7	61.9	32.1	31.3	76.2	55.1	102.4	45.0	85.1	36.9
6932	(Clinton-Boone) x Cartier	56.9	59.5	62.0	30.1	35.3	73.3	40.6	91.8	45.0	63.5	41.1
4327	Mohawk (check)	56.2	56.9	64.8	30.5	31.0	70.7	51.1	86.8	38.5	75.7	31.5
5942	Bond-Rainbow x Hajira-Joanette	56.0	49.7	57.4	26.6	45.3	71.8	50.8	80.9	45.8	75.5	49.2
6765	Landhafer x (Mindo x Hajira-Joanette)	55.9	54.2	61.3	30.5	44.7	67.2	47.7	77.4	44.8	75.2	51.9
6941	Shefford	55.4	50.9	42.1	25.4	26.7	63.4	54.1	102.6	54.4	78.6	32.4
5319	Fulton x Clinton	55.1	53.6	60.0	18.4	31.1	75.7	49.9	74.6	47.6	84.7	43.2
6913	(Bond-Rainbow x Hajira-Joanette) x Landhafer	54.9	51.9	58.8	18.0	42.8	72.3	48.9	81.6	43.5	76.7	52.2
5869	Clintaife: Clinton ² x Santa Fe	54.8	46.0	54.0	39.8	29.2	65.5	36.7	98.8	45.9	77.2	25.2
4259	Clinton 59 (check)	54.7	60.6	47.0	11.9	32.9	76.7	55.9	80.4	54.6	72.4	39.9
5440	Waubay	54.5	51.0	61.1	26.7	28.9	65.0	53.9	78.5	42.7	82.9	45.6
6701	Clintonland	53.5	55.3	47.4	12.5	31.7	72.5	49.5	88.2	49.2	75.4	41.7
6942	Zephyr x Santa Fe	52.1	44.4	57.8	22.9	30.3	70.2	51.1	82.4	41.2	68.9	41.7
6646	Clinton x Santa Fe	51.3	43.0	45.8	21.8	28.0	65.8	47.6	84.5	44.5	80.5	32.7
560	Victory (old check)	49.9	46.4	60.0	37.9	22.3	45.0	36.3	96.4	36.9	68.4	18.6
4134	Roxton	49.4	41.1	62.4	36.2	29.9	45.5	29.2	91.1	43.4	65.9	19.2
6944	Bonda x Santa Fe	46.6	39.4	45.8	21.9	21.7	66.6	43.1	65.2	40.6	75.0	40.2
6943	Zephyr x Santa Fe	46.0	35.0	36.9	26.5	28.4	66.5	46.8	65.5	40.2	67.9	45.6
3502	Tama (H. victorinae check)	43.6	36.6	13.4	23.5	35.9	63.5	45.2	89.7	43.7	41.2	44.7

1/ Grown as observation nursery; yield data was not included in average.

2/ Substitution made through error.

Table 4 . Test weights on stations reporting of varieties and hybrid selections included in the Uniform Northeastern States Oat

Experiment grown in 1954.

C. I. No.	Variety or Selection	Average Stations	Presque Isle, Maine	Orono, Maine	Durham, N. H.	Burlington, Vt.	Feeding Hills, Mass. (Early)	Feeding Hills, Mass. (Late)	Morganstown, W. Va.	Beltsville, Md. 2/
Pounds										
6662	Improved Garry	30.8	35.0	34.0	28.0	33.0	30.5	26.5	28.5	25.0
6648	Garry Selection	31.9	35.0	34.5	31.0	34.0	29.0	30.0	29.5	24.0 ^{3/}
6661	Rodney	32.8	34.5	37.0	27.0	36.0	29.5	34.5	31.0	24.5
6767	Simcoe	30.4	37.0	29.5	30.0	29.0	29.5	30.5	27.0	23.0
4521	Beaver	30.4	34.0	33.0	26.0	30.0	31.5	30.5	28.0	23.5
4157	Ajax	30.1	36.5	32.0	30.0	27.0	30.5	28.0	27.0	21.5
4134	Roxton	31.6	35.0	33.5	30.0	30.5	31.0	31.0	30.0	18.5
5946	Sauk	31.2	34.5	32.5	32.0	28.0	32.0	31.0	29.5	21.5
6701	Clintonland	33.6	37.5	37.0	27.0	32.0	34.5	33.0	34.5	26.0
4259	Clinton 59 (check)	33.1	38.0	37.0	30.0	30.0	32.0	31.0	34.0	24.0
6941	Shefford	29.9	32.0	31.5	26.0	28.0	31.5	30.0	30.5	23.0
5332	Craig	29.7	34.0	34.0	29.0	27.5	29.0	26.5	28.0	20.5
4988	Mo. O-205	33.4	35.0	36.5	32.0	29.5	34.0	32.5	34.5	27.5
5226	Fortune	29.4	35.0	30.0	32.0	24.5	27.5	30.0	27.0	19.0
4970	Abegweit	28.9	35.5	32.0	30.0	27.0	27.5	26.0	24.0	20.5
5647	Clarion	33.5	36.0	35.5	32.0	32.0	35.0	31.0	33.0	27.0
5440	Waubay	33.7	36.0	36.5	31.0	30.0	35.0	33.5	34.0	27.0
5441	Clinton x Marion	32.6	37.0	33.5	31.0	32.0	34.0	34.0	27.0	26.5
560	Victory (old check)	30.6	38.5	34.0	29.0	22.0	28.5	30.5	32.0	16.0
4372	Shelby (midseason check)	32.8	38.5	37.0	29.0	30.0	36.5	33.5	25.0	23.0
3502	Tama (H. victoriae check)	29.6	30.0	28.5	30.0	30.0	29.0	26.5	33.0	21.5
5319	Fulton x Clinton	32.3	34.0	34.0	29.0	31.5	34.5	32.0	31.0	24.0
5942	Bond-Rainbow x Hajira-Joanette	33.3	35.5	38.5	29.0	36.0	33.5	33.5	27.0	22.0
6938	Forward ² x (Victoria-Richland)	32.6	38.0	35.0	33.0	29.5	28.5	30.5	33.5	22.0
6939	H. 1273 x Spooner	33.4	36.5	35.0	29.0	36.0	34.0	32.0	31.5	23.0
6942	Zephyr x Santa Fe ^m	31.2	32.5	33.5	27.0	28.0	33.5	33.0	1 ^{1/}	20.5
6943	^m	31.8	34.5	33.5	26.0	31.5	31.5	34.5	31.0	24.5
6944	Bonda x Santa Fe	29.5	29.0	30.5	26.0	25.0	31.5	31.5	33.0	22.5
6846	Clinton x Santa Fe	33.1	33.0	34.0	29.0	31.0	32.5	31.5	34.5	20.5
4327	Mohawk (check)	33.6	37.5	35.5	27.0	33.0	33.5	35.0	34.5	18.5
6913	(Bond-Rainbow x Hajira-Joanette) x Landhafer	33.3	36.5	36.0	27.0	34.0	36.0	34.5	29.0	24.0
6765	Landhafer x (Mindq x Hajira-Joanette)	29.6	29.0	31.0	26.0	29.0	31.5	29.5	31.5	21.0
5869	Clintaefe: Clinton ³ x Santa Fe	33.4	36.0	35.0	28.0	31.0	33.0	34.0	36.5	19.0
6641	(Clinton-Boone) x Cartier ⁿ	33.6	35.0	37.0	31.0	30.0	32.0	33.5	36.5	20.5
6932	ⁿ	32.1	35.0	35.0	30.0	30.0	31.0	33.5	30.5	24.0
6940	New York Selection	30.6	35.0	34.0	30.0	28.0	28.5	32.5	26.0	19.5

1/ Average of station (30.6) substituted for missing data.
2/ Grown as observation nursery; yield data was not included in average.
3/ Substitution made through error.

Table 5 . Plant height on stations reporting of varieties and hybrid selections included in the Uniform Northeastern States

Oat Experiment grown in 1954.

C. I. No.	Variety or Selection	Average Stations	Presque Isle, Maine	Orono, Maine	Durham, N. H.	Burlington, Vt.	Inches				Beltsville, Md. 1/
							Feeding Hills, Mass. (Early)	Feeding Hills, Mass. (Late)	Morgantown, W. Va.	2/	
6662	Improved Garry	42.7	49	49	45	35	43	37	41	37 2/	
6648	Garry Selection	41.4	49	48	46	32	43	32	40	33	
6661	Rodney	41.4	48	46	35	35	45	38	43	35	
6767	Simcoe	44.4	49	51	47	34	46	41	43	37	
4521	Beaver	42.7	49	49	42	32	45	39	43	35	
4157	Ajax	43.0	45	50	43	34	46	40	43	34	
4134	Roxton	48.0	52	53	48	38	52	44	49	37	
5946	Sauk	39.1	41	43	38	30	43	39	40	32	
6701	Clintonland	36.0	40	40	29	31	40	36	36	31	
4259	Clinton 59 (check)	36.4	39	38	33	32	40	37	36	32	
6941	Shefford	41.9	44	48	38	33	47	41	42	37	
5332	Craig	35.6	39	41	29	30	38	35	37	29	
4988	Mo. O-205	39.6	43	47	32	31	45	40	39	36	
5226	Fortune	42.9	49	49	38	35	47	41	41	35	
4970	Abegweit	40.1	45	45	35	33	43	39	41	33	
5647	Clarion	38.4	42	42	34	34	41	37	39	35	
5440	Waubay	38.0	42	40	33	31	42	38	40	34	
5441	Clinton x Marion	39.6	45	47	34	32	42	40	37	33	
560	Victory (old check)	43.6	48	50	39	37	47	40	44	33	
4372	Shelby (midseason check)	39.4	46	46	34	31	42	37	40	33	
3502	Tama (H. victorise check)	34.9	40	41	27	28	39	34	35	32	
5319	Fulton x Clinton	33.0	36	37	24	27	37	32	38	32	
5942	Bond-Rainbow x Hajira-Joanette	38.9	44	46	31	32	43	38	38	34	
6938	Forward ² x (Victoria-Richland)	41.1	47	47	37	34	43	39	41	36	
6939	RL.1273 x Spooner	41.4	47	51	30	41	44	42	35	37	
6942	Zephyr x Santa Fe ¹¹	37.3	43	45	29	30	41	38	35	37	
6943	"	39.4	42	49	27	33	44	42	39	41	
6944	Bonda x Santa Fe	41.3	46	50	28	35	44	44	42	38	
6646	Clinton x Santa Fe	39.4	44	48	27	30	45	44	38	39	
4327	Mohawk (check)	37.3	42	42	28	30	43	38	38	32	
6913	(Bond-Rainbow x Hajira-Joanette) x Landhafer	38.9	43	45	28	33	44	40	39	36	
6765	Landhafer x (Mindo x Hajira-Joanette)	38.9	44	43	29	34	44	41	37	38	
5869	Clintonafe: Clinton ³ x Santa Fe	38.0	43	43	28	31	40	39	42	32	
6641	(Clinton-Boone) x Cartier ¹¹	39.7	46	46	30	32	41	42	41	34	
6932	"	39.3	46	45	34	31	40	40	39	37	
6940	New York Selection	41.1	46	45	38	36	42	41	40	32	

1/ Grown as observation nursery.

2/ Substitution made through error.

Table 6 . Percent of lodging of varieties and selections included in the Uniform Northeastern States Oat Experiment grown in 1954.

C. I. No.	Variety or Selection	Average Stations 6	Presque Isle, Maine	Burlington, Vt.	Feeding Hills, Mass. (Early)	Feeding Hills, Mass. (Late)	State College, Penn.	Morgantown, W. Va.	Beltville, Md. 1/
					Percent				
6662	Improved Garry	17.3	95	0	0	0	9	0	10
6648	Garry Selection	18.2	95	0	0	0	14	0	5
6661	Rodney	18.8	95	0	5	0	12	1	0
6767	Simcoe	20.8	70	20	14	0	20	1	0
4521	Beaver	29.7	95	60	11	0	12	0	0
4157	Ajax	30.2	82	60	13	0	25	1	0
4134	Roxton	6.3	10	0	0	0	25	3	0
5946	Sauk	7.8	38	0	0	0	8	1	0
6701	Clintonland	4.5	9	0	0	0	18	0	0
4259	Clinton 59 (check)	2.0	7	0	0	0	5	0	0
6941	Shefford	31.3	63	90	0	0	35	0	0
5332	Craig	21.7	85	0	0	0	45	0	13
4988	Mo. Q-205	33.3	100	90	5	0	5	0	15
5226	Fortune	33.8	95	90	5	0	8	5	25
4970	Abegweit	8.7	12	20	0	0	20	0	5
5647	Clarion	9.2	23	0	0	0	32	0	0
5440	Waubay	5.5	13	0	5	0	15	0	0
5441	Clinton x Marion	31.0	70	100	0	0	16	0	3
560	Victory (old check)	8.3	17	20	0	0	10	3	3
4372	Shelby (midseason check)	9.5	30	10	0	0	14	3	0
3502	Tama (H. victorise check)	28.3	100	0	10	0	10	50	0
5319	Fulton x Clinton	18.3	43	0	5	0	62	0	0
5942	Bond-Reinbow x Hajira-Joanette	12.5	57	0	0	0	18	0	0
6938	Forward x (Victoria-Richland)	27.0	87	20	18	0	12	25	5
6939	RL 1273 x Spooner	14.0	60	0	0	0	12	12	20
6942	Zephyr x Santa Fe	19.5	92	0	6	0	19	0	35
6943	"	55.8	93	100	10	70	62	0	40
6944	Bonda x Santa Fe	22.5	95	0	0	0	10	30	35
6646	Clinton x Santa Fe	56.0	98	90	5	0	78	5	15
4327	Mohawk (check)	4.8	11	0	0	0	18	0	13
6913	(Bond-Rainbow x Hajira-Joanette) x Landhafer	5.7	13	0	0	0	13	8	15
6765	Landhafer x (Mind x Hajira-Joanette)	23.3	97	0	0	0	38	5	20
5869	Clinton 3 x Santa Fe	10.8	40	20	0	0	5	0	35
6641	(Clinton-Boone) x Cartier	42.0	87	0	5	70	88	0	30
6932	"	52.0	82	30	10	70	95	2	25
6940	New York Selection	14.7	50	20	0	0	8	10	0

1/ Grown as observation nursery.

2/ Substitution made through error.

Table 7 . Date of heading and ripening on stations reporting of varieties and hybrid selections included in the Uniform Northeastern States Oat Experiment grown in 1954

Table 7A. Straw and Forage Yields in the Northeastern States Nursery in 1954.

C. I. No.	Variety or Selection	Date Headed										Date Ripe		
		Average 6 Stations	Presque Isle, Maine	Orono, Maine	Feeding Hills, Mass. (Early)	Feeding Hills, Mass. (Late)	Ithaca, N. Y.	State College, Penna.	Morgantown, W. Va. 1/	Beltsville, Md. 1/	Feeding Hills, Mass. (Early)	Feeding Hills, Mass. (Late)	Beltsville, Md. 1/	
6765	Landhafer x(Mindo x Hajira-Joanette)	6/28	7/12	7/19	6/15	6/23	6/18	6/17	6/7	6/4	7/15	7/19	6/28	
4988	Mo. O-205	30	13	21	17	25	21	22	6/7	6/4	15	20	29	1.73
6913	(Bond-Rainbow x Hajira-Joanette) x Land.	30	13	30	16	25	20	22	7	9	15	20	30	1.70
6701	Clinton	7/1	16	22	21	27	21	22	9	11	16	21	29	1.23
5942	Bond-Rainbow x Hajira-Joanette	1	15	21	20	27	21	21	8	8	17	24	7/1	1.10
6943	Zephyr x Santa Fe	1	15	23	19	27	21	21	8	4	16	23	6/28	1.57
6646	Clinton x Santa Fe	1	15	22	19	28	20	21	8	4	16	24	28	1.70
5647	Clarion	2	16	22	21	27	21	23	9	10	17	22	30	1.40
4259	Clinton 59 (check)	2	16	22	21	27	21	23	9	11	17	21	29	1.60
5440	Waubay	2	16	22	22	28	22	22	9	14	17	22	7/1	1.03
6941	Shefford	2	16	23	21	27	22	22	9	10	17	22	6/30	1.53
4327	Mohawk (check)	3	17	22	22	28	22	24	11	14	18	25	7/2	1.67
5319	Fulton x Clinton	3	16	23	21	26	22	26	8	8	17	20	6/30	1.93
6942	Zephyr x Santa Fe	3	18	24	22	29	22	22	8	7	18	25	28	1.20
3502	Tama (H. victorise check)	3	17	24	22	29	22	24	10	8	17	21	30	1.49
6939	HL 1273 x Spooner	4	19	27	21	30	22	24	11	10	17	26	30	1.27
5441	Clinton x Marions Jackson	4	18	24	23	28	22	24	9	14	17	23	7/1	1.60
6648	Garry Selection	4	20	28	22	26	23	24	11	8	19	20	6/29	1.80
4521	Beaver	4	20	26	23	29	23	23	11	14	18	25	7/1	2.67
6944	Bonda x Santa Fe	4	19	26	21	30	23	25	9	6	17	28	6/28	1.54
6641	(Clinton-Boone) x Cartier	5	21	28	23	7/1	23	23	11	15	19	26	7/2	1.64
4372	Shelby (midseason check)	5	19	26	22	6/30	23	25	11	10	18	26	6/30	1.40
5946	Sauk	5	20	29	22	30	23	26	12	14	20	26	30	2.10
6662	Improved Garry	5	20	28	22	30	23	24	11	14	18	26	30	2.03
6767	Simcoe	5	19	26	23	7/1	23	25	11	14	20	26	7/2	1.73
4157	Ajax	5	19	26	23	7/1	23	24	11	14	18	26	30	2.33
5869	Clinton ² x Santa Fe	5	22	27	23	6/30	24	25	12	14	18	25	1	1.97
6932	(Clinton-Boone) x Cartier	6	21	29	23	7/1	25	26	10	15	18	24	6/30	2.10
5332	Craig	6	22	29	23	7/1	25	23	11	11	18	27	6/30	1.93
4970	Abegweit	6	21	28	24	7/1	25	26	-	13	18	25	30	1.60
6938	Forward ² x (Victoria-Richland)	7	20	28	25	3	25	25	-	15	20	31	7/4	1.27
6940	New York Selection	7	22	29	21	4	24	26	-	15	19	30	2	1.97
5226	Fortune	7	22	28	24	3	26	27	-	15	19	28	2	1.87
6661	Rodney	8	23	30	25	3	26	26	-	13	20	31	1	2.43
4134	Roxton	10	25	8/2	28	6	27	30	13	17	21	8/5	4	1.48
560	Victory (old check)	10	24	3	28	7	27	30	-	18	29	4	4	1.59
														1.42
														1.47

1/ Not included in average.

2/ Substitution made through error.

Table 8. Reaction to diseases on stations reporting of varieties and hybrid selections included in the Uniform Northeastern States Oat Experiment in 1954.

C. I. No.	Variety or Selection	Crown Rust			Stem Rust 3/					Smut				Sep-Red Leaf
		Ames, Iowa Field Tests	Ames, Iowa Greenhouse Tests	Aurora, N. Y. Reac.	Ames, Iowa Coef.	Ames, Iowa Greenhouse	Tests on Races	Burlington, Vt.	Aurora, N. Y. Prev.	Burlington, Vt.	Feeding Hills, Mass. (Early)	Feeding Hills, Mass. (Late)	Ithaca, N. Y. 4/	
		Coef. 1/	Type 2/	o/o Reac.			7a	8	o/o	o/o	o/o	o/o	Heads	o/o
6662	Improved Garry	10	4	R	0	1	1	1	0	0	0	0	-	23
6648	Garry Selection	5	-	R	1	1	-	-	T/T	0	0	0	-	27
6661	Rodney	5	4	20	0	1	4	4	T/T	0	0	0	2	30
6767	Simcoe	1	4	60	0	1	1	4	1/100	0	0	0	8	30
4521	Beaver	5	4	75	1	4	1	X	T/22	0	0	0	-	30
4157	Ajax	3	4	60	5	4	1	4	T/80	0	0	0	10	27
4134	Roxton	5	-	Int.	3	4	1	-	10/100	0	0	0	5	23
5946	Sauk	16	4	R	5	4	-	4	60	0	0	0	3	20
6701	Clintonland	1	0	HR	5	4	1	4	1/100	0	0	0	-	27
4259	Clinton 59 (check)	10	4	CS	5	4	4	2	15/100	0	0	0	-	30
6941	Shefford	20	-	CS	20	4	4	2	T/100	0	0	0	-	27
5332	Craig	10	4	Int.	5	4	-	-	40/100	30	11.7	3.0	532	30
4988	Mo. O-205	3	4	Int.	1	4	4	4	18/100	0	0	0	-	30
5226	Fortune	15	4	75	1	4	1	4	3/90	0	0	0	-	50
4970	Abegweit	10	4	Int.	1	4	1	4	0	0	0	0	-	33
5647	Clarion	20	4	R	1	4	1	4	T/50	0	0	0	-	13
5440	Waubay	18	4	60	1	4	1	4	T/T	0	0	0	-	57
5441	Clinton x Marion	30	4	60	1	4	1	4	T/T	0	0	0	2	40
560	Victory (old check)	5	-	S	5	4	-	-	T/T	0	0	0	-	27
4372	Shelby (midseason check)	20	4	CS	3	4	4	4	T/100	0	0	0	3	17
3502	Tama (H. victorise check)	10	2	CS	5	4	4	2	7/100	0	0	0	-	23
5319	Fulton x Clinton	10	-	S	5	4	1	4	T/20	0	0	0	-	435/
5942	Bond-Rainbow x Hajira-Joanette	5	-	CS	0	-	-	-	3/100	0	0	0	5	53
6938	Forward x (Victoria-Richland)	10	-	HR	5	4	-	-	T/T	0	0	0	-	33
6939	HL 1273 x Spooner	3	-	R	1	-	-	-	5/100	0	0	0	-	20
6942	Zephyr x Santa Fe	3	-	3	0	-	-	-	T/T	0	0	0	-	23
6943	"	-	-	1	0	-	-	-	T/T	0	0	0	-	37
6944	Bonda x Santa Fe	-	-	1	0	-	1	Het	45/100	0	0	0	5	50
6646	Clinton x Santa Fe	-	-	1	-	-	-	-	50/100	0	0	0	-	27
4327	Mohawk (check)	-	-	1	-	-	-	-	62/100	0	0	0	-	43
6913	(Bond-Rainbow x Hajira-Joanette) x Land.	2	4	T	0	4	4	2	25/100	0	0	0	2	23
6765	Landhafer x (Mindq x Hajira-Joanette)	3	0	1	0	-	-	-	T/100	0	0	0	-	33
5869	Clintafe: Clinton x Santa Fe	1	-	T	10	4	4	1	T/10	0	0	0	-	53
6641	(Clinton-Boone) x Cartier	18	4	1	5	4	1	4	45/100	0	0	0	-	20
6932	"	12	-	5	5	-	-	-	30/100	0	0	0	-	17
6940	New York Selection	-	-	10	-	-	-	-	23/100	0	0	0	-	13

1/ Coefficient field readings.
2/ Greenhouse readings on oats inoculated with Crown Rust Race 202.
3/ At Beltsville, stem rust (7 or 8) was present on all entries except C.I. Nos. 6662, 6661, 5942, 6939, 6765 and 6913.
4/ Race: R = Resistant; HR = Highly Resistant; S = Susceptible; CS = Comp. S.I. Resistant; T = Tolerant.
5/ Infected with H. victorise at Orono, Me.
6/ 4 = most seriously affected; 1 = little or no red leaf present
7/ Substitution made through error.

NORTH CENTRAL REGION

Although the oat acreage and oat production in the United States in 1954 were the second largest on record, being exceeded only by the record acreage and production in 1946 and 1945, respectively the national average yield of 35.9 bushels per acre, however, was exceeded in 1945, 1948, and 1951, and by the record yield of 37.0 bushels in 1915. In contrast, oat acreage in the twelve North Central states in 1954 was the second lowest during the last ten years, being only 77 percent of the total acreage for the United States as compared with an average of 80 percent for the last ten years. The North Central Region was responsible for 79 percent of the national oat production compared with 82 percent for the last ten years. The average yield was 37.0 bushels per acre in the North Central Region in 1954 compared with an average of 35.3 for the past ten years.

The North Central Region produced good yields of oats in 1954 despite heavy losses from stem and crown rust in portions of Iowa, Minnesota, Wisconsin, South Dakota, North Dakota, Nebraska, and Michigan. The yields in these seven states in 1954 averaged 8 bushels per acre lower than their maximum yields during the past ten years, while the yields in Illinois, Indiana, Ohio, Missouri, and Kansas, where the rusts were not important, averaged three bushels per acre higher than the previous maximum for the same period. Although unfavorable weather, red leaf, etc., were important limiting factors in certain areas, stem and crown rust were of major importance in the northwest portion of the North Central Region. The estimated losses from stem and crown rust in Iowa in 1954 were 11 and 9 percent, respectively.

Varieties and selections susceptible to race 7 of stem rust and to race 202 and similar races of crown rust were generally low in yield and test weight in the areas of heavy rust infection. Although races 7 of stem rust and 202 of crown rust appeared to be the predominant races, there was some evidence of a late "build-up" of race 8 of stem rust on susceptible varieties such as Mo. O-205. There also was a trace of stem rust infection at most locations on Rodney and other entries susceptible only to race 7A, indicating the general prevalence of this race throughout most of the region. Fortunately, there was no evidence of the presence of either of the virulent races 6 of stem rust or 263 of crown rust.

Uniform North Central States Oat Nursery

The Uniform North Central States Oat Nursery was grown at 16 locations in the region in 1954, as follows:

Urbana, Illinois
Lafayette, Indiana
Ames, Iowa
Manhattan, Kansas
East Lansing, Michigan
St. Paul, Minnesota
Columbia, Missouri
Lincoln, Nebraska

Dickinson, North Dakota
Fargo, North Dakota
Langdon, North Dakota
Minot, North Dakota
Columbus, Ohio
Wooster, Ohio
Brookings, South Dakota
Madison, Wisconsin

The C.I. number, variety or cross, selection number, and state or province nominating each of the 40 entries included in the 1954 Uniform North Central States Oat Nursery are given in Table 9. Thirty-four of the entries were nominated by states in the North Central Region; three were from Canada; and three were check varieties. Eighteen of the entries were new in 1954. A summary of the performance of the 40 entries at all locations where data were recorded in 1954 is presented in Table 10. Detailed agronomic and pathologic data for each location are present in Tables 11 to 20, inclusive.

Yield, Bushels per Acre

Yield data were obtained from 14 of the 16 stations where the Uniform North Central States Nursery was grown in 1954. Stations not reporting yields were Columbus, Ohio, and Langdon, North Dakota. Yields were much higher than in 1953. Only one-half of the entries averaged 60 bushels or more in 1953, while all entries averaged more than 60 bushels in 1954. The five highest yielding entries in 1954 were C.I. No's. 6537, 6936, 6913, and 6935, and Sauk. C.I. No. 6537 was a re-entry from Iowa, while C.I. No's. 6936, 6913, and 6935 were new rust-resistant entries from Minnesota. Six of the ten highest yielding entries were new in 1954. Sauk and Mo. O-205 were the only named varieties among the ten highest yielding entries in 1954, while Sauk, Mo. O-205, Andrew, Simcoe, and Garry were the five highest yielding entries in 1953. The 25 highest yielding entries in 1954 were all resistant to race 7 of stem rust. As in 1953, there was a much higher positive correlation between high yield and resistance to stem rust than there was between high yield and resistance to crown rust. This again is in contrast to the usually higher estimated losses from crown rust.

Test Weight

Data on test weight were obtained from 14 stations. Stations not reporting test weight were Columbus and Wooster, Ohio. The average test weight ranged from 35.2 pounds per bushel for C.I. No. 6933 to 27.7 pounds for the Gopher check. The five entries highest in test weight were C.I. No's. 6933, 6934, 6537, 6913, and 6642. They were also among the 13 highest yielding. The fourth highest yielding entry, C.I. 6935, was very disappointing in test weight, being next to the lowest for the region. Except for the crown-rust-resistant Clintland and Benton⁷ x Landhafer, the highest testing 20 entries were also resistant to race 7 of stem rust. Waubay, Jackson, Clintland, Clarion, and Mo. O-205 were the highest five in test weight among the named varieties. The test weights of Sauk, Simcoe, Garry, and Rodney were disappointingly low.

Groat Percentage

The percentage of groats was determined on grain grown only at Ames, Iowa, and Aberdeen, Idaho. Landhafer x (Mindo x Hajira-Joanette) x Andrew (C.I. 6936) was outstanding for average high percentage of groats (77.6) from both locations. Other outstanding entries were Benton x Marion (C.I. 6928), Landhafer x (Mindo x Hajira-Joanette) (C.I. 6765), Andrew, Benton x Marion (C.I. 6929), Mo. O-205, Clinton x Ukraine (C.I. 6537), and Clintland, with average groat percentages of 77.2, 77.1, 77.0, 76.8, 75.7, 75.3 and 75.3, respectively. Garry, Sac x Hajira-Joanette (C.I. 5927) and Vicland x (Branch x Clinton-Santa Fe) (C.I. 6916) were lowest with average groat percentages of 69.7, 70.7 and 70.9, respectively.

Plant Height

Plant height was recorded at 12 stations with Langdon, North Dakota; Columbus and Wooster, Ohio; and Madison, Wisconsin, not reporting. There was a range in average height from 31 to 38 inches, with C.I. No's. 6916 and 6937 being the shortest, and Garry, Simcoe, Rodney, and C.I. No's. 6931 and 6939 being the tallest. There did not appear to be much relationship between average height and average yield in 1954 although the entries were generally taller than in 1953, reflecting the better growing conditions in 1954.

Standing Ability

Percent of lodging, or straw strength, was recorded at only 6 stations. Severe lodging was reported from Langdon, North Dakota, Columbus, Ohio, and Madison, Wisconsin; but no varietal differences were recorded. Clintland, Waubay, and C.I. No's. 6644, 6748, and 6929 were the top five entries for standing ability. C.I. No's. 6537 and 6933, which ranked first and seventh in average yield, ranked seventh and eighth in average standing ability, respectively. Other high-yielding entries appeared to be relatively weak strawed.

Date Headed

Date of heading was reported by all stations except Columbia, Missouri. There was a range of 10 days in average heading with C.I. No. 6937 the earliest and Rodney the latest. Other early heading entries were Andrew and C.I. No's. 6916 and 6765. C.I. No's. 6537, 6936, and 6913-which ranked first, second and third in yield-were relatively early in heading. There was no evident relationship between yield and date heading, the ten highest yielding entries ranging from June 20 to 26 in heading.

Date Ripe

Only 7 of the 16 stations reported date of ripening. Date headed and date ripe usually are closely correlated but premature ripening of susceptible entries caused by heavy rust infection upset this relationship in 1954. The average period from date headed to date ripe ranged from 24 to 30 days. C.I. No. 6748 required only 24 days from heading to ripening, while Clinton x Ukraine, Andrew, and C.I. No. 6765 each required 30 days. The lower yielding varieties tended to have a shorter period between heading and ripening in 1953, which probably was due mainly to premature ripening caused by stem and crown rust. The earliest maturing entries, C.I. No's. 6916, 6737 and 6748, had an average date ripe of July 16, while Rodney, the latest in maturity, ripened on July 23.

Reaction to Stem Rust

Stem rust readings under natural infection with no artificial inoculation were recorded at nine stations. Readings also were received from two nurseries inoculated with race 7 and from two inoculated with race 8. The seedling reactions of all entries to races 6, 7, 7A, and 8 of stem rust under greenhouse conditions were obtained at Ames, Iowa, and also to 7A and 8 at Lafayette, Indiana, and Manhattan, Kansas. These data are presented in Tables 17 and 18.

The last 10 entries listed in Tables 17 and 18 were all susceptible to race 7. These same entries were much more heavily infected under natural field conditions, demonstrating the greater natural prevalence and severity of race 7 in the Region. Among the first 30 entries, which were all resistant to race 7, five (Rodney and C.I. No's. 6537, 6765, 6935, and 6939) were susceptible to race 7A. The susceptibility of these five otherwise highly rust-resistant entries may be important, since race 7A appeared to be present in trace amounts throughout the Region in 1954. The susceptibility of 22 of the 40 entries to race 8 also should be considered, since this common race appears to be increasing in prevalence and severity in the region.

The combined resistance of Garry and C.I. No's. 5927, 5870, 6913 and 6936 to all known races of stem rust is significant in view of the heavy losses caused by stem rust in 1953 and 1954. Only C.I. No. 6936 appeared to be resistant to races 7, 7A and 8 at high temperatures.

Reaction to Crown Rust

Nine stations reported the severity of crown rust infection under nursery conditions. The seedling reaction in the greenhouse to race 45 at Manhattan, Kansas, and to races 202 and 263 at Ames, Iowa, was also reported. C.I. No. 6936, which possessed the highest resistance to individual races of stem rust, also had the highest resistance to crown rust. C.I. No's. 6937, 6913, 6916, 6935, and 6965 also were outstanding for resistance to crown rust. None of the 40 entries was resistant in the seedling stage to the new race 263 of crown rust which was identified at Ames, Iowa, among collections obtained in 1953 from Winnipeg, Manitoba. There was no indication that race 263 was present under field conditions in 1954.

Reaction to Smut, Septoria and Leaf Blight

Andrew x Clinton (C.I. 5967) and R.L. 1273 x Spooner (C.I. 6939) were outstanding for resistance to smut. Twenty of the 40 entries have averaged only 1 percent, or less, of smut infection in the Uniform North Central Smut Nurseries grown in 1952, 1953, and 1954. The only highly susceptible entries have been Gopher, Simcoe, and Sac x Hajira-Joanette (C.I. 5927). It is evident, however, that some other entries are susceptible to specific strains of smut. For example, Dr. E. D. Hansing found 18 of the 40 entries were more or less susceptible to the "Victoria" strain of smut at Manhattan, Kansas; and 8 entries were susceptible to the "Fulton" strain. The data from Columbia, Missouri, also indicate that certain of the entries were susceptible to specialized strains of smut. Dr. C. S. Holton found Simcoe to be susceptible to 11 of 22 races of smut at Pullman, Washington, in 1954. C.I. No. 5927 was susceptible to all 15 races of loose smut, but moderately resistant to the 7 races of covered smut he used in his tests. Sauk was susceptible to 3 races of loose smut; while Rodney, Garry, and LaSalle were each susceptible to single races of loose smut. Clarion, Waubay, and Dupree (C.I. 4672) were moderately to highly resistant to all 22 races of loose and covered smut in Dr. Holton's 1954 tests.

Septoria readings were reported for the North Central Nursery from only Ames, Iowa, and East Lansing, Michigan. Fifteen entries were recorded as being relatively resistant at both locations, with C.I. No's. 6752, 6641, and 6668 having the highest resistance at both locations.

Readings for an unidentified leaf spot also were recorded at Ames, Iowa, and East Lansing, Michigan. Fifteen of the entries were resistant at both locations. The leaf spot appeared to be similar to the so-called "non-parasitic" leaf spot previously observed by numerous investigators in the region.

Summary

Heavy losses suffered from stem rust in certain portions of the North Central Region during 1953 and 1954 emphasize the immediate need for adequate resistance to common races 7 and 8 and the potential importance of races 7A and 6. Crown rust has, however, caused much higher average losses in the region during the past 10 or 20 years. The need for combined adequate resistance to all prevalent races of both rusts is paramount. Along with combined resistance to both rusts, smut, Septoria, red leaf and other important diseases, an "ideal" oat variety should produce a high yield of high test weight and good quality grain; it should be very stiff strawed, relatively early in maturity, generally not too tall, uniform for all characteristics; and it should be attractive in appearance.

None of the 40 entries in the 1954 Uniform North Central States Nursery closely approached the "ideal" variety. Clinton x Ukraine (C.I. 6537); (Bond-Rainbow x Hajira-Joanette) x Landhafer (C.I. 6913); Clinton x (Boone - Cartier) (C.I. 6933); Landhafer x (Mindo x Hajira-Joanette) x Andrew (C.I. 6936); and R.L. 1273 x Spooner (C.I. 6939) were among several entries that were outstanding for their combinations of desirable and important characteristics. The outstanding performance of many of the new entries and the general superiority of most of the experimental strains over the varieties farmers are now growing was particularly gratifying.

Table 9. Information on entries included in the Uniform North Central States Oat Nursery in 1954.

C.I. No.	Variety or cross	Selection No.	Entered by
4170	Andrew (ck)	II-33-21	Check
5966	Andrew x Clinton	489408	Nebraska
5967	Andrew x Clinton	48Ab.4537	Nebraska
6752	Beacon x (Hawkeye-Victoria)	X436-2	Wisconsin
6931	Benton x (Clinton x Boone-Cartier)	437A1-29-2-1	Indiana
6930	Benton ⁷ x Landhafer	5129	Indiana
6928	Benton x Marion	47-99	Illinois
6929	Benton x Marion	47-108	Illinois
6913	(Bond-Rainbow x Haj.-Joan.) x Landh.	II-47-25	Minnesota
5647	Clarion	Abd.-194-3001	Iowa
6701	Clintland	B4916A3-4	Indiana
4259	Clinton ⁵⁹ (ck)	Ind. 1335-3-10	Check
6644	Clinton ² x Ark. 674	461A1-3-41-2	Indiana
5940	Clinton x (Boone-Cartier)	422A1-48-2	Indiana
6641	Clinton x (Boone-Cartier)	422A1-48-3-2	Indiana
6668	Clinton x (Boone-Cartier)	432A1-48-2-2-34	Indiana
6932	Clinton x (Boone-Cartier)	422A1-48-3-2-20	Indiana
6933	Clinton x (Boone-Cartier)	422A1-59-1-6	Indiana
6748	Clinton ⁴ x Santa Fe	5867-51-10936	Iowa
6537	Clinton x Ukraine	49-2166	Iowa
6938	Forward ² x Victoria-Richland	X304-8	Wisconsin
6662	Garry	R.L. 1692,27	Manitoba
2027	Gopher (ck)	Minn. 674	Check
5441	Jackson	Abd.-196-3006	Michigan
6765	Landhafer x (Mindo x Haj.-Joan.)	II-46-3	Minnesota
6936	Landhafer - (Mindo x H.-J.) x Andrew	II-50-51	Minnesota
6935	Landhafer - (Mindo x H.-J.) x Clinton	II-50-12	Minnesota
4988	Mo. O-205	Mo. 04205	Missouri
6642	Nemaha x (Clinton x Boone-Cartier)	436A2-2-4-1	Indiana
6934	Nemaha x (Clinton x Boone-Cartier)	436A1-16-6	Indiana
6939	R.L. 1273 x Spooner	X342-1-1	Wisconsin
6661	Rodney	R.L. 2123	Manitoba
5870	Sac x Hajira-Joanette	34-5-3-1	Iowa
5927	Sac x Hajira-Joanette	Ia. 94-78-8-1	South Dakota
6647	Santa Fe x Benton	Abd.-3976-3	South Dakota
5946	Sauk	X345-1	Wisconsin
6767	Simcoe	C.A.N. 742	Ontario
6916	Vicland x (Branch x Clinton ² - S.F.)	X486-4	Wisconsin
6937	Vicland x (Branch x Clinton ² - S.F.)	X486-12	Wisconsin
5440	Waubay	Abd.-173-2850	South Dakota

Table 10. Average of agronomic and pathologic data obtained from stations reporting on Uniform North Central States Oat Nursery grown in 1954.

C.I. No.	Variety or cross	Test Groat ^{1/}			Height (12) In.	Lodging (5) %	Date		Crown rust (9) %	Stem rust (9) %
		Yield (14) Bu.	weight (14) Lb.	(2) %			head (15) June	ripe (7) July		
6537	Clinton x Ukraine	76.8	34.2	75.3	34	7	21	21	8	6
6936	Land. x (Min. x H-J) x And.	75.7	32.7	77.6	35	29	21	19	1	2
6913	(Bond-Rain. x H-J) x Land.	75.5	33.6	74.2	36	15	20	18	3	1
6935	Land. x (Min. x H-J) x Clin.	75.2	28.4	71.6	34	23	23	20	4	4
5946	Sauk	74.8	29.9	72.2	35	11	25	21	20	13
6939	R.L. 1273 x Spooner	74.1	33.1	72.6	38	17	24	20	9	3
6933	Clinton x (Boone-Cartier)	73.8	35.2	72.2	35	8	21	19	20	12
5940	Clinton x (Boone-Cartier)	73.7	30.1	73.5	36	27	23	20	31	10
4988	Mo. O-205	73.6	32.4	75.7	36	29	21	18	15	9
6938	Forward ² x Victoria-Rich.	72.7	30.6	73.9	37	30	26	21	14	10
6767	Simcoe	72.2	30.4	74.0	38	21	24	20	16	12
6934	Nem. x (Cl. x Bo.-Cartier)	71.5	34.4	71.7	35	17	24	19	14	7
6642	Nem. x (Cl. x Bo.-Cartier)	70.8	33.6	72.2	33	11	22	18	20	11
6641	Clinton x (Boone-Cartier)	70.6	30.8	72.5	36	30	25	21	20	7
6752	Beacon x (Hawkeye-Victoria)	70.4	33.1	72.1	34	22	24	20	12	14
6662	Garry	70.2	29.7	69.7	38	18	26	21	20	2
6929	Benton x Marion	69.6	31.8	76.8	34	5	21	17	39	16
6932	Clinton x (Boone-Cartier)	69.5	31.1	73.6	35	17	20	19	23	10
4170	Andrew (ck)	69.4	32.3	77.0	35	13	19	20	33	14
5440	Waubay	68.7	33.4	74.8	35	5	23	19	45	18
5647	Clarion	68.6	32.6	73.3	35	8	22	19	41	19
6765	Land. x (Min. x H-J)	68.5	28.6	77.1	35	11	19	20	4	3
6668	Clinton x (Boone-Cartier)	68.2	30.8	72.0	35	38	25	21	19	7
6931	Benton x (Cl. x Bo.-Cart.)	67.8	33.2	74.0	38	18	23	18	17	8
5870	Sac x Hajira-Joanette	67.8	31.1	70.7	33	6	22	19	24	1
5966	Andrew x Clinton	67.7	30.7	74.2	34	16	22	17	34	28
5967	Andrew x Clinton	67.7	28.8	71.9	34	16	22	19	32	32
5441	Jackson	67.6	32.8	72.0	36	19	24	19	36	12
6928	Benton x Marion	67.5	31.0	77.2	35	11	20	18	36	35
6916	Vic. x (Branch x Cl. ² -S.F.)	67.1	31.7	70.9	31	13	19	16	3	16
6701	Clintland	66.9	32.8	75.3	34	4	22	17	8	30
6937	Vic. x (Branch x Cl. ² -S.F.)	66.6	32.2	71.7	31	9	18	16	3	18
5927	Sac x Hajira-Joanette	66.5	32.4	74.0	34	15	20	19	24	2
6644	Clinton ² x Ark. 674	66.5	30.9	73.7	33	5	21	17	15	30
6661	Rodney	65.8	30.6	72.1	38	9	28	23	11	4
6647	Santa Fe x Benton	65.6	31.1	72.4	33	32	20	17	13	34
6930	Benton ⁷ x Landhafer	63.9	32.5	73.6	36	14	22	19	15	35
4259	Clinton 59 (ck)	63.9	31.4	74.2	34	10	22	17	47	38
6748	Clinton ⁴ x Santa Fe	63.2	31.5	72.8	32	5	23	16	17	38
2027	Gopher (ck)	61.1	27.7	74.2	36	36	24	19	40	25

() Number of north central locations averaged.

^{1/} Average Ames, Iowa and Aberdeen, Idaho.

Table 11. Yields on stations reporting of varieties and selections in the Uniform North Central States Oat Nursery grown in 1954.

C.I. No.	Variety or Selection	Av. 14 N.C. Stations	Ill. Urbana	Ind. Lafayette	Iowa Ames	Manhattan Kansas	E. Lansing Mich.	St. Paul Minn.	Columbia Mo.	Lincoln Nebr.	Dickinson N. D.	Fargo N. D.	Minot N. D.	Wooster Ohio	Brookings S. D.	Madison Wis.
									Bushels							
6537	Clinton x Ukraine	76.8	53.7	73.3	99.9	77.9	79.7	106.6	64.2	90.4	48.4	84.8	77.3	54.1	82.2	82.4
6936	Land. x (Min. x H-J) x And.	75.7	57.9	70.0	104.8	81.9	77.4	95.9	63.3	89.3	47.2	67.0	96.8	60.8	82.1	65.1
6913	(Bond-Rain. x H-J) x Land.	75.5	54.5	72.9	114.9	83.4	69.1	92.6	68.9	90.9	39.7	77.4	71.6	59.8	72.7	88.7
6935	Land. x (Min. x H-J) x Clin.	75.2	50.7	69.8	91.3	86.5	72.4	110.2	56.7	78.7	43.1	90.4	90.7	60.0	74.9	77.4
5946	Sauk	74.8	55.8	84.3	95.7	76.6	79.1	98.1	63.1	86.7	42.3	82.2	76.2	54.6	81.3	71.6
6939	R.L. 1273 x Spooner	74.1	48.5	79.2	107.6	83.3	68.4	104.8	59.2	86.8	46.7	80.4	62.6	59.4	76.4	74.5
6933	Clinton x (Boone-Cartier)	73.8	48.9	74.6	114.9	73.6	76.4	99.8	59.9	85.9	39.9	79.6	66.0	62.3	73.9	78.2
5940	Clinton x (Boone-Cartier)	73.7	39.1	84.9	108.0	78.2	80.1	103.9	60.7	82.0	42.0	78.2	67.0	51.4	75.9	80.9
4988	Mo. O-205	73.6	60.5	70.8	93.2	75.4	73.4	95.9	61.9	96.4	40.8	90.4	65.3	54.3	82.6	69.2
6938	Forward ² x Victoria-Rich.	72.7	36.1	76.1	89.2	76.6	73.4	94.8	60.6	86.6	46.5	83.6	89.7	67.7	75.6	60.8
6767	Simcoe	72.2	43.9	63.5	101.1	80.1	71.3	95.2	58.2	82.9	39.1	88.4	80.6	52.8	83.1	70.8
6934	Nem. x (Cl. x Bo.-Cartier)	71.5	43.9	82.1	89.7	79.6	66.4	92.3	56.5	80.7	41.6	85.4	66.4	74.3	72.5	69.8
6642	Nem. x (Cl. x Bo.-Cartier)	70.8	69.0	70.2	109.1	73.2	72.3	85.9	52.1	91.8	37.2	68.4	65.6	55.7	74.3	65.8
6641	Clinton x (Boone-Cartier)	70.6	44.7	81.7	94.7	73.5	86.1	98.9	53.9	77.1	33.1	78.8	66.0	48.7	75.0	76.0
6752	Beacon x (Hawkeye-Victoria)	70.4	52.4	73.8	94.9	73.9	72.4	89.3	60.7	84.0	36.4	82.8	76.3	50.5	69.5	68.8
6662	Garry	70.2	45.8	66.7	92.4	73.6	79.1	90.5	51.6	78.6	45.5	89.0	65.0	58.1	71.2	75.3
6929	Benton x Marion	69.6	56.1	69.0	100.7	66.2	70.6	88.6	67.9	83.8	35.3	81.3	59.1	59.6	67.4	69.4
6932	Clinton x (Boone-Cartier)	69.5	52.1	75.2	100.9	67.5	83.5	93.3	57.0	82.9	33.3	67.4	47.2	61.8	73.8	76.9
4170	Andrew (ok)	69.4	66.7	61.6	102.7	68.2	66.1	90.0	71.1	95.0	42.9	72.6	58.6	39.2	76.9	59.9
5440	Waubay	68.7	58.8	76.5	97.7	73.6	75.6	84.2	58.2	80.3	39.2	61.2	60.5	55.7	73.2	66.9
5647	Clarion	68.6	60.3	76.4	96.8	70.4	74.5	90.5	66.2	78.7	40.9	64.6	55.9	57.6	65.4	62.7
6765	Land. x (Min. x H-J)	68.5	53.1	66.4	91.1	78.4	70.7	91.8	52.7	73.9	34.1	78.8	70.9	57.2	68.6	71.3
6668	Clinton x (Boone-Cartier)	68.2	35.3	75.0	101.1	70.0	85.6	100.6	52.7	72.0	36.3	73.8	61.3	55.5	69.8	65.4
6931	Benton x (Cl.-Bo.-Cart.)	67.8	56.0	69.4	92.6	74.0	70.7	89.5	53.1	78.9	40.3	70.4	58.0	59.2	68.7	69.1
5870	Sac x Hajira-Joanette	67.8	58.7	72.5	88.5	70.0	74.6	89.2	61.3	81.0	36.5	66.6	74.4	55.5	68.6	52.2
5966	Andrew x Clinton	67.7	59.1	72.0	101.2	62.9	64.9	83.2	54.5	90.4	45.6	68.4	50.7	60.9	62.3	71.3
5967	Andrew x Clinton	67.7	57.8	76.7	88.8	69.7	72.1	87.7	69.3	88.3	37.7	62.8	53.3	59.0	63.6	60.8
5441	Jackson	67.6	35.7	82.6	91.0	61.6	75.2	85.1	60.1	77.6	48.0	76.8	69.2	50.4	69.7	62.9
6928	Benton x Marion	67.5	57.7	69.6	101.1	65.9	76.5	78.5	68.2	86.2	38.4	64.2	47.7	68.1	57.8	65.1
6916	Vic. x (Bran. x Cl. ² -S.F.)	67.1	61.5	59.8	92.1	79.5	69.1	84.9	50.4	93.2	37.6	69.0	70.1	52.1	73.4	46.6
6701	Clintonland	66.9	53.9	71.2	101.1	79.8	71.7	85.0	52.7	73.7	38.7	68.4	63.4	48.1	58.0	70.6
6937	Vic. x (Bran. x Cl. ² -S.F.)	66.6	74.7	56.2	98.8	69.9	66.0	78.0	68.1	92.0	34.3	80.4	49.4	49.4	64.2	51.5
5927	Sac x Hajira-Joanette	66.5	52.2	57.4	86.9	63.6	65.5	92.8	55.8	87.4	36.4	89.0	63.1	58.2	73.8	49.3
6644	Clinton ² x Ark. 674	66.5	56.7	63.5	98.7	60.8	67.6	87.4	55.1	78.8	34.4	79.2	59.3	58.9	63.0	67.5
6661	Rodney	65.8	34.9	63.0	92.8	61.7	80.8	96.9	41.2	66.7	41.7	80.6	73.0	58.3	68.0	61.2
6647	Santa Fe x Benton	65.6	77.5	63.9	89.3	61.5	77.8	76.8	58.9	85.4	34.1	67.0	45.9	58.1	64.1	58.7
6930	Benton x Landhafer	63.9	53.8	65.3	88.1	74.1	68.7	82.5	60.2	80.2	38.9	58.2	48.9	64.9	57.6	53.7
4259	Clinton ⁵⁹ (ck)	63.9	55.5	70.7	96.0	65.7	67.2	83.9	50.5	79.8	46.1	64.8	44.0	49.5	55.5	65.0
6748	Clinton ⁴ x Santa Fe	63.2	55.9	67.2	87.7	64.7	71.4	76.9	54.6	80.5	34.9	62.4	50.9	57.2	60.7	60.1
2027	Gopher (ck)	61.1	48.0	58.6	84.3	55.6	68.0	79.5	55.5	72.0	38.9	68.4	50.4	61.0	63.3	51.7

Table 13. Plant height on stations reporting of varieties and selections included in the Uniform North Central States Oat Nursery grown in 1954.

C.I. No.	Variety or cross	Av. 12 N. Stations	Urbana Ill.	Lafayette Ind.	Ames Iowa	Manhattan Kansas	E. Lansing Mich.	St. Paul Minn.	Columbia Mo.	Lincoln Neb.	Dickinson N. D.	Fargo N. D.	Minot N. D.	Brookings S. D.
								Inches						
6916	Vic. x (Bran. x Cl. 2-S.F.)	31	32	28	35	28	25	31	33	34	24	35	35	34
6937	Vic. x (Bran. x Cl. 2-S.F.)	31	34	28	35	28	24	30	35	35	25	33	34	33
6748	Clinton ⁴ x Santa Fe	32	33	28	35	27	28	33	32	35	25	35	40	36
6647	Santa Fe x Benton	33	34	28	36	27	28	34	32	37	24	35	41	35
6644	Clinton ² x Ark. 674	33	34	28	37	30	29	32	34	36	24	36	38	35
6642	Nem. x (Cl. x Bo.-Car.)	33	34	30	38	29	29	34	33	38	23	37	39	34
5870	Sac x Hajira-Joanette	33	37	28	38	28	28	35	33	36	22	37	42	35
6701	Clintonland	34	35	29	38	30	29	35	37	37	26	37	40	36
4259	Clinton 59 (ck)	34	34	29	38	31	27	35	35	38	25	36	39	36
5967	Andrew x Clinton	34	36	29	38	28	28	35	34	37	24	40	41	36
5966	Andrew x Clinton	34	33	29	38	30	29	34	35	37	24	41	41	36
6935	Land. x (Min. x H-J) x Clin.	34	35	28	36	30	29	35	37	37	25	39	42	35
5927	Sac x Hajira-Joanette	34	33	30	38	29	28	34	35	37	23	40	44	37
6929	Benton x Marion	34	37	29	37	31	27	34	36	38	24	39	42	37
6537	Clinton x Ukraine	34	33	28	38	31	31	38	35	39	23	39	40	37
6752	Beacon x (Hawkeye-Victoria)	34	33	30	39	30	29	39	35	39	22	37	41	38
6936	Land. x (Min. x H-J) x And.	35	34	28	39	31	31	35	37	39	25	37	42	37
6933	Clinton x (Boone-Cartier)	35	38	28	38	30	28	35	37	39	24	41	41	36
6928	Benton x Marion	35	35	29	39	31	28	36	37	38	25	39	44	37
4170	Andrew (ck)	35	35	31	39	30	31	36	34	38	27	39	42	37
6765	Land. x (Min. x H-J)	35	36	31	40	31	31	35	37	35	24	40	42	37
6932	Clinton x (Boone-Cartier)	35	34	30	38	31	28	37	37	39	25	38	46	37
5647	Clarion	35	36	31	38	32	29	36	36	36	27	40	43	38
6668	Clinton x (Boone-Cartier)	35	35	29	40	29	28	41	36	40	24	36	44	40
5946	Sauk	35	37	32	39	30	31	38	36	39	21	40	42	39
6934	Nem. x (Cl. x Bo.-Car.)	35	37	30	40	30	29	37	38	39	24	39	42	39
5440	Waubay	35	36	30	39	32	28	37	37	36	25	42	44	39
5940	Clinton x (Boone-Cartier)	36	36	32	38	30	31	39	38	40	24	39	41	38
4988	Mo. O-205	36	34	32	39	32	30	35	37	40	26	41	42	39
6913	(Bond-Rain. x H-J) x Land.	36	36	31	41	32	31	35	40	39	25	39	42	37
2027	Gopher (ck)	36	38	34	37	32	29	38	38	42	25	38	40	38
6641	Clinton x (Boone-Cartier)	36	36	32	40	30	32	41	38	40	23	40	41	39
5441	Jackson	36	35	32	40	33	31	39	39	38	26	39	43	40
6930	Benton ⁷ x Landhafer	36	38	31	41	31	30	39	38	40	24	41	45	39
6938	Forward ² x Victoria-Rich.	37	37	32	40	35	30	42	39	41	28	37	45	41
6931	Benton x (Cl. x Bo.-Car.)	38	38	31	41	33	32	41	39	42	28	41	47	39
6939	R.L. 1273 x Spooner	38	36	35	40	33	32	42	41	43	27	41	43	40
6662	Garry	38	37	33	41	36	32	39	40	42	26	43	44	41
6767	Simcoe	38	36	35	42	34	34	43	40	40	23	43	45	41
6661	Rodney	38	36	35	40	37	31	44	39	42	24	43	45	41

Table 14. Percent of lodging and straw strength on stations reporting of varieties and selections included in the Uniform North Central States Oat Nursery grown in 1954.

C.I. No.	Variety or cross	Av. 5 N.C. Stations	Urbana Ill.	Lafayette Ind.	Ames Iowa	St. Paul Minn.	Minot N. D.	E. Lansing Mich. cl _r 1/
					Percent			
6701	Clintland	4	F	10	12	0	0	.075
6644	Clinton ² x Ark. 674	5	F	2	12	0	10	.077
6929	Benton x Marion	5	F	2	23	0	0	.057
6748	Clinton ⁴ x Santa Fe	5	F	5	10	0	10	.090
5440	Waubay	5	F	15	12	0	0	.094
5870	Sac x Hajira-Joanette	6	T	20	12	0	0	.074
6537	Clinton x Ukraine	7	4	10	23	0	0	.047
6933	Clinton x (Boone-Cartier)	8	1	10	27	0	0	.079
5647	Clarion	8	T	25	15	0	0	.082
6937	Vic. x (Bran. x Cl. ² -S.F.)	9	T	5	40	0	0	.060
6661	Rodney	9	6	20	20	0	0	.065
4259	Clinton 59 (ck)	10	T	10	32	0	10	.093
5946	Sauk	11	3	20	30	0	0	.062
6928	Benton x Marion	11	1	2	40	0	10	.069
6642	Nem. x (Cl. x Bo.-Car.)	11	0	10	45	0	0	.085
6745	Land. x (Min. x H-J)	11	1	15	40	0	0	.047
4170	Andrew (ck)	13	1	25	40	0	0	.052
6916	Vic. x (Bran. x Cl. ² -S.F.)	13	T	15	52	0	0	.049
6930	Benton ⁷ x Landhafer	14	T	10	50	10	0	.062
5927	Sac x Hajira-Joanette	15	3	20	30	0	20	.055
6913	(Bond-Rain. x H-J) x Land.	15	T	40	37	0	0	.061
5967	Andrew x Clinton	16	1	30	27	0	20	.093
5966	Andrew x Clinton	16	T	30	20	0	30	.068
6932	Clinton x (Boone-Cartier)	17	28	40	15	0	0	.069
6934	Nem. x (Cl. x Bo.-Car.)	17	20	25	40	0	0	.057
6939	R.L. 1273 x Spooner	17	15	25	42	0	5	.060
6662	Garry	18	43	15	30	0	0	.069
6931	Benton x (Cl. x Bo.-Car.)	18	11	25	55	0	0	.068
5441	Jackson	19	15	25	55	0	0	.064
6767	Simcoe	21	27	15	55	0	10	.055
6752	Beacon x Hawkeys-Victoria	22	4	20	85	0	0	.066
6935	Land. x (Min. x H-J) x Clin.	23	10	60	47	0	0	.125
5940	Clinton x (Boone-Cartier)	27	84	15	35	0	0	.074
6936	Land. x (Min. x H-J) x And.	29	1	60	72	10	0	.061
4988	Mo. 0-205	29	2	60	82	0	0	.039
6938	Forward ² x Victoria-Rich.	30	78	30	40	0	0	.055
6641	Clinton x (Boone-Cartier)	30	63	25	63	0	0	.060
6647	Santa Fe x Benton	32	0	20	75	43	20	.046
2027	Gopher (ck)	36	23	80	50	10	15	.070
6668	Clinton x (Boone-Cartier)	38	90	25	75	0	0	.066

1/ Description of cl_r factor is given in "Lodging resistance in oats" by J. E. Grafius and H. M. Brown, September 1954, Agron. Jour.

Table 15. Date of heading on stations reporting of varieties and selections included in the Uniform North Central States Oat Nursery grown in 1954.

C.I. No.	Variety or cross	Av. 15 N.C. Stations	Urbana Ill.	Lafayette Ind.	Ames Iowa	Manhattan Kansas	E. Lansing Mich.	St. Paul Minn.	Lincoln Nebr.	Dickinson N. D.	Fargo N. D.	Langdon N. D.	Minot N. D.	Columbus Ohio	Wooster Ohio	Brookings S. D.	Madison Wis.
6937	Vic. x {Bran. x Cl. 2-S.F.}	6/18	6/3	6/7	6/10	6/25	6/9	6/13	6/20	6/9	6/28	6/29	7/12	7/6	6/18	6/18	6/17
6916	Vic. x {Bran. x Cl. 2-S.F.}	19	4	8	12	27	14	14	21	5	26	30	12	9	19	20	19
4170	Andrew (ok)	19	3	8	11	26	14	14	21	6	27	3	12	10	19	20	19
6765	Land. x (Min. x H-J)	19	4	7	12	25	15	15	20	7	26	30	13	9	19	21	18
6913	Bond-Rain. x H-J x Land.	20	4	12	12	26	17	15	20	5	25	30	12	8	19	20	19
5927	Sac x Hajira-Joanette	20	4	8	12	26	15	15	20	7	26	7/1	12	10	19	19	19
6647	Santa Fe x Benton	20	3	7	11	25	18	18	22	5	26	1	12	12	19	20	19
6932	Clinton x (Bo.-Cartier)	20	4	14	11	28	15	15	22	8	29	6/30	15	8	19	21	17
6928	Benton x Marion	20	5	8	12	26	17	17	20	8	26	7/3	14	12	19	21	19
6537	Clinton x Ukraine	21	5	8	13	27	16	16	22	8	28	2	14	12	19	22	21
6936	Land. x (Min. x H-J) x And.	21	5	8	12	28	19	16	22	7	27	4	13	10	19	22	19
6644	Clinton ² x Ark. 674	21	6	11	12	29	16	16	22	8	27	4	13	7	19	23	19
6933	Clinton x (Boone-Cartier)	21	4	14	13	28	19	19	22	7	27	2	12	7	20	21	20
4988	Mo. O-205	21	5	11	13	27	18	18	21	9	27	4	14	12	19	21	19
6929	Benton x Marion	21	5	12	12	26	19	19	22	9	7/2	2	13	12	19	21	21
5966	Andrew x Clinton	22	7	12	13	28	19	19	22	10	6/27	3	13	12	20	22	20
6701	Clintonland	22	7	13	14	28	19	19	22	9	27	3	14	12	19	22	22
4259	Clinton 59 (ok)	22	7	13	14	29	19	19	23	9	29	5	13	10	19	21	23
6642	Nem. x (Cl. x Bo.-Car.)	22	7	13	14	28	19	19	21	11	28	3	13	12	20	23	20
5647	Clarion	22	7	13	14	28	19	19	21	11	28	3	13	12	20	23	20
6930	Benton ⁷ x Landhafer	22	7	12	13	27	18	18	23	10	28	5	14	13	20	23	22
5870	Sac x Hajira-Joanette	22	8	12	13	27	19	19	24	10	27	7	14	14	19	23	22
6748	Clinton ⁴ x Santa Fe	22	7	12	14	28	19	19	23	9	29	4	15	13	19	23	23
5967	Andrew x Clinton	22	7	13	14	26	19	19	23	9	29	7	13	13	19	22	23
5940	Clinton x (Boone-Cartier)	23	10	14	11	30	14	14	25	11	7/1	8	16	13	1	19	24
6931	Benton x (Cl. x Bo.-Car.)	23	8	13	15	29	19	19	23	10	6/28	5	14	13	9	20	23
5440	Waubay	23	7	13	15	29	19	19	23	11	29	3	14	13	12	20	23
6935	Land. x (Min. x H-J) x Clin.	23	7	13	16	7/2	20	20	24	12	29	6	14	14	7	20	23
6939	R.L. 1273 x Spooner	24	8	14	15	6/30	20	20	25	11	30	7	14	12	9	21	24
6752	Beacon x (Hawkeye-Victoria)	24	7	13	14	7/1	19	19	25	11	7/1	5	15	13	21	25	23
2027	Gopher (ok)	24	10	14	15	2	20	20	25	12	6/29	6	13	12	20	23	23
6934	Nem. x (Cl. x Bo.-Car.)	24	9	14	15	6/30	20	20	25	11	29	7	15	13	9	24	24
5441	Jackson	24	8	14	15	7/1	20	20	25	10	30	6	14	13	12	24	24
6767	Simcoe	24	10	15	16	1	20	20	26	11	30	8	14	13	22	24	24
5946	Sauk	25	10	14	16	2	21	21	26	12	7/2	7	15	15	22	25	25
6668	Clinton x (Boone-Cartier)	25	11	8	18	2	21	21	26	13	1	7	16	15	22	25	24
6641	Clinton x (Boone-Cartier)	25	10	15	17	1	22	22	26	12	2	8	17	15	21	26	25
6662	Garry	26	11	14	18	5	21	21	26	13	2	8	16	15	22	25	25
6938	Forward ² x Victoria-Rich.	26	11	16	20	5	22	22	28	15	2	8	16	16	24	27	25
6661	Rodney	28	13	17	20	9	23	23	29	17	6/28	9	17	16	25	28	25

Table 16. Date of ripening on stations reporting of varieties and selections included in the Uniform North Central States Oat Nursery grown in 1954.

C.I. No.	Variety or cross	Av. 7 N.C. Stations	Urbana Ill.	E. Lansing Mich.	St. Paul Minn.	Lincoln Nebr.	Dickinson N. D.	Minot N. D.	Brookings S. D.
		Date							
6916	Vic. x {Bran. x Cl. ² -S.F.}	7/16	6/26	7/15	7/18	7/2	7/26	8/9	7/16
6937	Vic. x {Bran. x Cl. ² -S.F.}	16	27	15	16	2	26	9	17
6748	Clinton ⁴ x Santa Fe	16	29	17	16	2	26	7	17
6647	Santa Fe x Benton	17	28	17	18	2	26	10	16
6701	Clintland	17	7/1	17	16	2	28	9	16
6644	Clinton ² x Ark. 674	17	6/29	17	18	2	27	9	17
6929	Benton x Marion	17	7/2	17	18	2	27	9	16
5966	Andrew x Clinton	17	6/30	17	16	4	28	9	17
4259	Clinton 59 (ck)	17	7/1	17	18	3	28	7	17
6913	(Bond-Rain. x H-J) x Land.	18	2	18	18	3	26	10	18
4988	Mo. O-205	18	6/29	17	19	1	28	14	17
6931	Benton x (Cl. x Bo.-Car.)	18	7/2	18	19	2	27	9	18
6642	Nem. x (Cl. x Bo.-Car.)	18	2	17	18	2	29	13	16
6928	Benton x Marion	18	3	17	18	3	29	9	18
5870	Sac x Hajira-Joanette	19	2	17	19	3	27	14	17
5967	Andrew x Clinton	19	4	17	19	4	29	9	17
6933	Clinton x (Boone-Cartier)	19	1	17	19	3	28	12	20
6936	Land. x (Min. x H-J) x And.	19	6/30	17	19	3	27	18	17
5927	Sac x Hajira-Joanette	19	30	18	19	4	28	15	18
6930	Benton ⁷ x Landhafer	19	7/3	18	19	5	28	11	18
5440	Waubay	19	3	17	19	5	29	12	18
5441	Jackson	19	3	17	19	5	29	12	18
6934	Nem. x (Cl.-Bo.-Car.)	19	2	18	21	4	27	12	20
6932	Clinton x (Boone-Cartier)	19	1	18	20	4	27	14	20
5647	Clarion	19	4	17	19	6	28	13	18
2027	Gopher (ck)	19	5	17	19	4	29	9	18
4170	Andrew (ck)	20	3	18	20	4	28	15	18
6752	Beacon x (Hawkeye-Victoria)	20	1	17	20	4	28	16	21
5940	Clinton x (Boone-Cartier)	20	4	18	21	4	29	16	18
6767	Simcoe	20	5	17	20	5	29	14	20
6765	Land. x (Min. x H-J)	20	1	18	21	5	28	18	19
6935	Land. x (Min. x H-J) x Clin.	20	1	18	21	5	27	18	21
6939	R.L. 1273 x Spooner	20	4	18	20	5	28	17	20
6537	Clinton x Ukraine	21	3	18	21	5	29	18	20
5946	Sauk	21	4	18	21	6	30	16	21
6662	Garry	21	6	18	22	6	28	16	20
6938	Forward ² x Victoria-Rich.	21	6	19	21	5	28	17	23
6668	Clinton x {Boone-Cartier}	21	5	18	22	5	30	16	23
6641	Clinton x {Boone-Cartier}	22	5	20	21	5	30	17	22
6661	Rodney	23	7	19	23	8	28	19	23

Table 17. Coefficient of stem rust infection under natural nursery conditions on stations reporting of oat varieties and selections included in Uniform North Central States Oat Nursery grown in 1954.

C.I. No.	Variety or cross	Coefficient of stem rust infection under natural nursery conditions									
		Av. 9 N.C. Stations	Lafayette Ind.	Ames Iowa	E. Lansing Mich.	Lincoln Nebr.	Dickinson N. D.	Farro N. D.	Langdon N. D.	Minot N. D.	Brookings S. D.
						Percent					
6913	(Bond-Rainbow x H-J) x Land.	1	T	0	0	T	0	0	T	5	2
5870	Sac x Hajira-Joanette	1	T	0	0	0	0	0	T	5	4
5927	Sac x Hajira-Joanette	2	T	0	0	0	0	0	T	5	4
6936	Land. x (Min. x H-J) x And.	2	T	0	0	10	0	0	T	5	5
6662	Garry	2	T	1	0	0	0	0	T	5	5
6939	R.L. 1273 x Spooner	3	T	2	0	T	T	0	10	T	12
6765	Land. x (Min. x H-J)	3	T	0	0	5	T	0	10	10	5
6935	Land. x (Min. x H-J) x Clin.	4	T	0	0	20	0	0	5	5	3
6661	Rodney	4	T	1	0	0	10	5	10	5	8
6537	Clinton x Ukraine	6	T	0	0	T	T	5	10	30	6
6668	Clinton x (Boone-Cartier)	7	T	5	0	T	0	10	20	15	10
6934	Nem. x (Cl. x Bo.-Car.)	6	T	2	0	T	0	15	20	10	15
6641	Clinton (Boone-Cartier)	7	T	5	0	T	0	5	30	10	12
6931	Benton x (Cl. x Bo.-Car.)	8	T	1	0	T	T	10	30	10	25
4988	Mo. O-205	9	1	3	T	10	T	10	20	20	20
6932	Clinton x (Boone-Cartier)	10	T	5	0	5	T	15	30	15	15
5940	Clinton x (Boone-Cartier)	10	T	5	0	T	T	5	40	15	20
6938	Forward ² x Victoria-Rich.	10	T	5	5	5	T	20	30	15	11
6642	Nem. x (Cl. x Bo.-Car.)	11	T	5	0	T	0	20	30	10	30
5441	Jackson	12	T	5	1	5	T	20	20	35	18
6933	Clinton x (Boone-Cartier)	12	T	10	0	5	T	20	20	15	35
6767	Simcoe	12	T	15	0	0	T	30	30	20	15
5946	Sauk	13	T	10	0	T	0	40	40	10	18
6752	Beacon x (Hawkeye-Victoria)	14	1	20	0	T	T	50	20	20	15
4170	Andrew (ck)	14	T	2	T	5	T	50	20	30	18
6929	Benton x Marion	16	1	1	0	5	T	20	60	15	40
6916	Vic. x (Bran. x Cl. ² -S.F.)	16	T	2	1	10	0	40	40	30	25
6937	Vic. x (Bran. x Cl. ² -S.F.)	18	T	2	0	10	0	40	40	40	32
5440	Waubay	18	T	5	0	10	5	50	40	35	20
5647	Clarion	19	T	5	0	5	30	30	30	45	25
2027	Gopher (ck)	25	3	30	0	20	5	70	20	50	25
5966	Andrew x Clinton	28	16	30	1	40	T	50	10	50	50
6644	Clinton ² x Ark. 674	30	12	20	T	20	30	60	50	45	30
6701	Clintonland	30	T	20	2	35	10	70	40	45	50
5967	Andrew x Clinton	32	16	30	T	40	T	70	20	60	55
6647	Santa Fe x Benton	34	12	50	5	25	0	50	50	60	50
6928	Benton x Marion	35	16	20	T	40	30	60	50	45	50
6930	Benton ⁷ x Landhafer	35	24	20	3	40	10	50	60	60	50
4259	Clinton 59 (ck)	38	12	40	T	30	40	70	50	45	50
6748	Clinton ⁴ x Santa Fe	38	24	40	T	40	40	60	50	45	45

C.I. No.	Variety or cross	Race 6			Race 7			Race 7a			Race 8		
		Ames Iowa	St. Paul Minn.	Columbia Mo.	Average	Ames Iowa	Lafayette Ind.	Ames Iowa	St. Paul Minn.	Columbia Mo.	Average	Ames Iowa	Manhattan Kansas
6913	(Bond-Rainbow x H-J) x Land.	Type 1	% 12	% 0	% 6	Type 1	0	Type 1	% 1	% 10	% 5	Type 1	1
5870	Sac x Hajira-Joanette	Type 1	% 8	% 0	% 4	Type 1	1	Type 1	% 1	% 30	% 16	Type 1	4
5927	Sac x Hajira-Joanette	Type 1	% 4	% 4	% 2	Type 1	1	Type 1	% 2	% 20	% 11	Type 1	1
6936	Land. x (Min. x H-J) x And.	Type 1	% 4	% 0	% 2	Type 1	1	Type 1	% 2	% 5	% 4	Type 1	1
6662	Garry	Type 1	% 4	% 15	% 10	Type 1	1	Type 1	% 2	% 20	% 11	Type 1	1
6939	R.L. 1273 x Spooner	Type 1	% 12	% 18	% 6	Type 1	3	Type 1	% 4	% 10	% 7	Type 1	1
6765	Land. x (Min. x H-J)	Type 1	% 18	% 10	% 14	Type 1	3	Type 1	% 6	% 10	% 8	Type 1	1
6935	Land. x (Min. x H-J) x Clin.	Type 1	% 16	% 0	% 8	Type 1	2	Type 1	% 1	% 10	% 5	Type 1	1
6661	Rodney	Type 1	% 9	% 0	% 3	Type 1	3	Type 1	% 4	% 40	% 22	Type 1	1
6537	Clinton x Ukraine	Type 1	% 12	% 10	% 5	Type 1	3	Type 1	% 3	% 10	% 6	Type 1	1
6668	Clinton x (Boone-Cartier)	Type 4	% 10	% 10	% 5	Type 1	1	Type 1	% 28	% 70	% 49	Type 4	4
6934	Nem. x (Cl. x Bo.-Car.)	Type 4	% 12	% 10	% 5	Type 1	1	Type 1	% 24	% 80	% 52	Type 4	4
6641	Clinton (Boone-Cartier)	Type 4	% 10	% 0	% 5	Type 1	1	Type 1	% 24	% 40	% 32	Type 4	4
6931	Benton x (Cl. x Bo.-Car.)	Type 4	% 16	% 10	% 8	Type 1	1	Type 1	% 32	% 70	% 51	Type 4	4
4988	Mo. O-205	Type 4	% 12	% 0	% 6	Type 1	1	Type 1	% 28	% 70	% 49	Type 3	3
6932	Clinton x (Boone-Cartier)	Type 4	% 10	% 10	% 5	Type 1	1	Type 1	% 28	% 70	% 49	Type 4	4
5940	Clinton (Boone-Cartier)	Type 4	% 14	% 0	% 7	Type 1	1	Type 1	% 28	% 40	% 34	Type 4	4
6938	Forward ² x Victoria-Rich.	Type 4	% 8	% 0	% 4	Type 1	1	Type 1	% 24	% 80	% 52	Type 4	4
6642	Nem. x (Cl. x Bo.-Car.)	Type 4	% 8	% 0	% 4	Type 1	1	Type 1	% 28	% 50	% 39	Type 4	4
5441	Jackson	Type 4	% 10	% 5	% 8	Type 1	1	Type 1	% 32	% 80	% 56	Type 4	4
6933	Clinton x (Boone-Cartier)	Type 4	% 14	% 10	% 7	Type 1	1	Type 1	% 28	% 80	% 54	Type 4	4
6767	Simcoe	Type 4	% 10	% 0	% 5	Type 1	0	Type 1	% 24	% 70	% 47	Type 4	4
5946	Sauk	Type 4	% 8	% 0	% 4	Type 1	1	Type 1	% 24	% 70	% 47	Type 4	4
6752	Beacon x (Hawkeye-Victoria)	Type 4	% 8	% 0	% 4	Type 1	1	Type 1	% 24	% 60	% 42	Type 4	4
4170	Andrew (ok)	Type 4	% 8	% 5	% 7	Type 1	1	Type 1	% 20	% 60	% 40	Type 4	4
6929	Benton x Marion	Type 4	% 14	% 10	% 7	Type 1	1	Type 1	% 32	% 70	% 51	Type 4	4
6916	Vic. x (Bran. x Cl. ² -S.F.)	Type 4	% 16	% 0	% 8	Type 1	1	Type 1	% 32	% 90	% 61	Type 4	4
6937	Vic. x (Bran. x Cl. ² -S.F.)	Type 4	% 14	% 0	% 7	Type 1	1	Type 1	% 24	% 90	% 57	Type 4	4
5440	Waubay	Type 4	% 18	% 5	% 12	Type 1	1	Type 1	% 24	% 80	% 52	Type 4	4
5647	Clarion	Type 4	% 10	% 10	% 5	Type 1	1	Type 1	% 36	% 80	% 58	Type 4	4
2027	Gopher (ok)	Type 4	% 52	% 10	% 31	Type 3	3	Type 4	% 28	% 70	% 49	Type 4	4
5966	Andrew x Clinton	Type 4	% 48	% 10	% 29	Type 3	3	Type 4	% 12	% 40	% 26	Type 1	1
6644	Clinton ² x Ark. 674	Type 4	% 56	% 10	% 33	Type 4	4	Type 4	% 10	% 15	% 12	Type 2	2
6701	Clintonland	Type 4	% 52	% 25	% 38	Type 2	2	Type 4	% 16	% 40	% 28	Type 1	1
5967	Andrew x Clinton	Type 4	% 56	% 20	% 38	Type 3	3	Type 3	% 10	% 30	% 20	Type 1	1
6647	Santa Fe x Benton	Type 4	% 60	% 40	% 50	Type 4	4	Type 4	% 21	% 70	% 45	Type 4	4
6928	Benton x Marion	Type 4	% 56	% 30	% 43	Type 3	3	Type 4	% 12	% 30	% 21	Type 2	2
6930	Benton ⁷ x Landhafer	Type 4	% 56	% 30	% 43	Type 3	3	Type 4	% 12	% 30	% 21	Type 2	2
4259	Clinton ⁵⁹ (ok)	Type 4	% 56	% 20	% 38	Type 3	3	Type 4	% 12	% 20	% 16	Type 2	2
6748	Clinton ⁴ x Santa Fe	Type 4	% 56	% 25	% 40	Type 3	3	Type 4	% 14	% 20	% 17	Type 1	1

Table 19. Adult and seedling reaction to crown rust on stations reporting of varieties and selections included in the Uniform North Central States Oat Nursery grown in 1954.

C.I. No.	Variety or cross	Field reaction to crown rust										Greenhouse reaction to crown rust			
		Av. 9 N.C. Stations	Lafayette	Ind.	Ames Iowa	Manhattan Kansas	St. Paul Minn.	Fargo N. D.	Langdon N. D.	Minot N. D.	Brookings S. D.	Madison Wisc.	Manhattan Kansas	Ames Iowa R-202	Ames Iowa R-263
		%	%	%	%	%	%	%	%	%	%	Type	Type	Type	
6936	Land. x (Min. x H-J) x And.	1	4	1	4	4	T	0	0	3	T	0	0	4	
6937	Vic. x (Bran. x Cl. 2-S.F.)	3	1	1	1	2	T	10	5	5	T	0	0	4	
6913	(Bond-Rain. x H-J) x Land.	3	T	1	1	9	T	5	5	5	T	0	0	4	
6916	Vic. x (Bran. x Cl. 2-S.F.)	3	T	1	1	2	T	0	5	8	T	0	0	4	
6935	Land. x (Min. x H-J) x Clin.	4	12	4	4	4	T	0	5	9	T	0	0	4	
6765	Land. x (Min. x H-J)	4	24	15	3	4	T	T	T	3	T	1	0	4	
6537	Clinton x Ukraine	8	15	24	1	24	T	20	T	15	T	0	4	4	
6701	Clinton	8	24	24	2	24	T	10	T	3	T	0	0	4	
6939	R.L. 1273 x Spooner	9	15	15	6	18	T	10	20	10	T	4	4	4	
6661	Rodney	11	12	8	14	52	T	5	20	4	T	0	4	4	
6752	Beacon x (Hawkeye-Victoria)	12	T	14	4	Het	T	10	40	5	T	0	0	4	
6647	Santa Fe x Benton	13	15	4	4	35	T	5	30	8	T	4	4	4	
6934	Nem. x (Cl. x Bo.-Car.)	14	28	4	4	18	T	20	40	15	T	4	4	4	
6938	Forward x Victoria-Rich.	14	12	18	7	35	T	30	40	10	T	0	4	4	
6930	Benton x Landhafer	15	4	7	12	35	T	10	20	15	T	3	4	4	
4988	Mo. O-205	15	21	12	12	35	T	3	20	2	T	3	1	4	
6644	Clinton x Ark. 674	15	60	5	5	52	T	5	10	10	T	3	4	4	
6767	Simcoe	16	21	12	12	24	T	10	40	10	T	4	4	4	
6748	Clinton x Santa Fe	17	72	2	2	15	T	20	40	1	T	0	0	4	
6931	Benton x (Cl. x Bo.-Car.)	17	4	12	12	40	T	20	50	12	T	4	4	4	
6668	Clinton x (Boone-Cartier)	19	12	11	11	60	T	20	30	20	T	4	4	4	
6933	Clinton x (Boone-Cartier)	20	15	18	18	54	T	20	40	15	T	4	4	4	
6642	Nem. x (Cl. x Boone-Car.)	20	12	20	18	59	T	10	40	18	T	4	4	4	
6641	Clinton x (Boone-Cartier)	20	30	18	16	65	T	10	30	15	T	4	4	4	
5946	Sauk	20	4	16	27	65	T	5	40	28	T	4	4	4	
6662	Garry	20	40	27	27	24	T	5	50	18	T	4	4	4	
6932	Clinton x (Boone-Cartier)	23	9	12	12	80	T	10	60	15	T	4	4	4	
5927	Sac x Hajira-Joanette	24	48	16	16	65	T	10	40	20	T	4	4	4	
5870	Sac x Hajira-Joanette	24	40	16	16	65	T	5	50	15	T	4	4	4	
5940	Clinton x (Boone-Cartier)	31	64	18	18	65	T	20	60	20	T	3	4	4	
5967	Andrew x Clinton	32	60	10	10	15	T	10	60	28	T	4	4	4	
4170	Andrew (ck)	33	9	16	16	54	T	20	80	30	T	4	4	4	
5966	Andrew x Clinton	34	15	40	40	65	T	10	70	20	T	4	4	4	
6928	Benton x Marion	35	21	20	20	65	T	30	70	28	T	3	4	4	
5441	Jackson	36	60	18	18	65	T	10	60	30	T	4	4	4	
6929	Benton x Marion	39	40	15	15	65	T	50	60	40	T	3	4	4	
2027	Gopher (ck)	40	68	30	30	65	T	15	60	22	T	4	4	4	
5647	Clarion	41	30	24	24	65	T	15	70	40	T	4	4	4	
5440	Waubay	45	60	16	16	65	T	20	90	30	T	4	4	4	
4259	Clinton 59 (ck)	47	72	40	40	80	T	20	80	30	T	4	4	4	

Table 20. Reaction to smut, septoria and leaf blight on stations reporting of oat varieties and selections included in the Uniform North Central States Oat Nursery grown in 1954.

C.I. No.	Variety or cross	Av. smut 1952-4		Smut infection in smut nursery				Infection in smut strain nursery				Septoria		Leaf blight	
		%	U O S N 1	Columbia Mo.	Lafayette Ind.	Ames Iowa	St. Paul Minn.	Manhattan, Kansas		Ames Iowa	E. Lansing Mich.	Ames Iowa	E. Lansing Mich.		
								Average Composite							
		%	Heads	%	%	%	%	%	%	%	%	Type	Type	Type	Type
5967	Andrew x Clinton	0.0	0	0	0	0	0	0	0	0	0	Int	Int	Int	Int
6939	R.L. 1273 x Spooner	0.0	0	0	0	0	0	0	0	0	0	R	Int	Int	Int
6933	Clinton x (Boone-Cartier)	0.1	0	0	0	0	0	0	0	0	0	R	Int	Int	Int
5647	Clarion	0.2	1	0	1	0	0	0	0	0	0	R	Int	Int	Int
4988	Mo. O-205	0.2	0	0	0	0	0	0	0	0	0	R	Int	Int	Int
6935	Land. x (Min. x H-J) x Clin.	0.2	0	0	0	0	0	0	0	0	0	Int	Int	Int	Int
6662	Garry	0.2	1	0	0	0	0	0	0	0	0	R	Int	Int	Int
5966	Andrew x Clinton	0.3	0	0	0	0	0	0	0	0	0	R	Int	Int	Int
6936	Land. x (Min. x H-J) x And.	0.4	0	0	0	0	0	0	0	0	0	S	Int	Int	Int
6537	Clinton x Ukraine	0.6	1	3	0	0	0	0	0	0	0	R	Int	Int	Int
5440	Waubay	0.6	10	0	0	2	0	0	0	0	0	R	Int	Int	Int
6938	Forward ² x Victoria-Rich.	0.6	0	0	0	0	0	0	0	0	0	R	Int	Int	Int
6752	Beacon x (Hawkeye-Victoria)	0.6	1	0	0	0	0	0	0	0	0	R	Int	Int	Int
4170	Andrew (ck)	0.7	1	0	0	0	0	0	0	0	0	R	Int	Int	Int
6916	Vic. x (Bran. x Cl. ² -S.F.)	0.7	0	0	0	0	0	0	0	0	0	S	Int	Int	Int
5441	Jackson	0.7	13	4	0	4	0	0	0	0	0	R	Int	Int	Int
6931	Benton x (Cl. x Bo.-Car.)	0.8	1	0	0	0	0	0	0	0	0	Int	Int	Int	Int
6661	Rodney	0.8	4	0	0	0	0	0	0	0	0	R	Int	Int	Int
6929	Benton x Marion	1.0	0	0	0	0	0	0	0	0	0	R	Int	Int	Int
6765	Land. x (Min. x H-J)	1.0	7	0	0	0	0	0	0	0	0	R	Int	Int	Int
6934	Nem. x (Cl. x Bo.-Car.)	1.1	1	0	0	0	0	0	0	0	0	R	Int	Int	Int
6913	(Bond-Rain. x H-J) x Land.	1.2	0	0	0	0	0	0	0	0	0	R	Int	Int	Int
6642	Nem. x (Cl. x Bo.-Car.)	1.2	0	0	0	0	0	0	0	0	0	R	Int	Int	Int
5870	Sac x Hajira-Joanette	1.9	1	0	0	0	0	0	0	0	0	R	Int	Int	Int
4259	Clinton 59 (ck)	2.0	0	0	0	0	0	0	0	0	0	R	Int	Int	Int
6641	Clinton x (Boone-Cartier)	2.0	18	4	0	0	0	0	0	0	0	R	Int	Int	Int
6937	Vic. x (Bran. x Cl. ² -S.F.)	2.2	0	0	0	0	0	0	0	0	0	S	Int	Int	Int
5940	Clinton x (Boone-Cartier)	2.4	34	0	0	0	0	0	0	0	0	R	Int	Int	Int
6748	Clinton ⁴ x Santa Fe	2.4	3	0	5	0	0	0	0	0	0	R	Int	Int	Int
6668	Clinton x (Boone-Cartier)	3.2	1	0	0	3	0	0	0	0	0	R	Int	Int	Int
6928	Benton x Marion	3.3	0	0	0	0	0	0	0	0	0	R	Int	Int	Int
5946	Sauk	3.3	6	0	0	0	0	0	0	0	0	R	Int	Int	Int
6644	Clinton ² x Ark. 674	3.3	8	20	0	2	0	0	0	0	0	S	Int	Int	Int
6701	Clintonland	3.5	4	0	0	2	0	0	0	0	0	R	Int	Int	Int
6932	Clinton x (Boone-Cartier)	4.7	1	0	0	2	0	0	0	0	0	R	Int	Int	Int
6930	Benton ⁷ x Landhafer	4.8	1	0	0	0	0	0	0	0	0	S	Int	Int	Int
6647	Santa Fe x Benton	8.0	14	0	0	4	0	0	0	0	0	R	Int	Int	Int
6767	Simcoe	17.3	53	30	0	6	0	0	0	0	0	R	Int	Int	Int
5927	Sac x Hajira-Joanette	18.3	0	0	0	0	0	0	0	0	0	Int	Int	Int	Int
2027	Gopher (ck)	—	144	40	0	49	0	0	0	0	0	R	Int	Int	Int
1/ Uniform oat smut nursery.															

1/ Uniform oat smut nursery.

NORTHWESTERN REGION

The extremes of weather were experienced in the region in 1954. The watershed of the Laramie River received practically no snow during the winter of 1953-54; consequently, any cereal crops grown on irrigated land supplied by the Laramie River were near a complete failure. The irrigated areas at Ft. Collins, Colorado, and east of there also suffered a much curtailed water supply. Farmers either supplemented their water supply by drilling deep wells or were forced to abandon some of their crops. In general, feed crops suffered at the expense of cash crops. The area irrigated by the North Platte river in Wyoming and western Nebraska appeared to be nearer average in amount of water available and crop yields produced.

The dryland area represented by the stations at Havre, Mont., Sheridan, Wyo., and Teton, Idaho, received below average precipitation during May, June and July, and low yields reflected this lack of moisture.

Northwestern Oregon, Washington, northern Idaho, and northwestern Montana received above-normal precipitation. Grains in some of these areas, especially in the Willamette valley, were salvaged for feed only by artificial drying.

A very heavy infection of stem rust was observed on Markton at Aberdeen, Idaho, just before ripening. However, a rust developed rather late, so there was no observable reduction in either yield or bushel weight. The stem rust epidemic did, however, develop so that a good reading could be made on late sown segregating material. Stem rust also was observed in eastern Wyoming and Colorado. Halo blight occurred at Bozeman in sufficient quantity to make readings feasible. Downy-mildew-infected late tillers were observed on many late sown oats at Aberdeen. Apparently land that was level, and uniformly wetted by each irrigation, and that produced grasses or cereals the previous year had an abundance of inoculum present.

Moderate to severe lodging was observed at Aberdeen and Prosser. At Aberdeen the lodging developed near maturity and did not appear to lower yield. The severe lodging at Prosser, in some instances, was combined with heavy infection of powdery mildew.

Uniform Irrigated Stations

The Uniform Northwestern States nursery grown on irrigated land was seeded on 12 stations in 1954. The cooperating stations were:

Brookings, South Dakota	Logan, Utah
Bozeman, Montana	Prosser, Washington
Laramie, Wyoming	Ontario, Oregon
Ft. Collins, Colorado	Union, Oregon
Hesperus, Colorado	Klamath Falls, Oregon
Aberdeen, Idaho	Lower Klamath Falls, Oregon

There were 34 entries in the test in 1954, and four of these, Markton, Victory, Carleton and Shelby, were check varieties. Seven entries are varieties that were developed in Canada, and four are from the North Central region. The selections from (Victoria x Richland) x Bannock, Clinton x Overland², C.I. 4189 x Overland, and Andrew x Clinton are the result of cooperative efforts of numerous personnel and stations.

The nursery at Laramie was abandoned because of drought. No data were reported from Brookings. The nursery at Ft. Collins was damaged by hail, and livestock and rain damaged the nursery at Union. Yields from these two stations are not included in the averages. The nursery at Creston, Montana, was entered erroneously in the irrigated summary in 1953. The land there was not irrigated. The application of minor elements and sprinkler irrigation to the land at Lower Klamath Falls area resulted in near-normal plant growth in 1954 so that the data from this nursery were included in the averages for the first time. Growth on the main Klamath station was uneven in the early part of the season. Other data are presented in tables 23 to 28. A list of the entries are shown in Table 21, and summary data presented in Table 22. Table 26 lists the lodging in both irrigated and non-irrigated tests, and table 28 contains miscellaneous data from the irrigated stations and the date of the ripening at non-irrigated stations.

Yield, Bushels per Acre

Yield data were obtained from ten stations in 1954, but only 8 stations were included in the average. The average yield of oats grown on irrigated stations were higher than in 1953, partly because the drought or otherwise damaged nurseries were omitted from the averages.

The highest yields were at Aberdeen, and the lowest at Ft. Collins, with average yields of all entries of 169.0 and 38.4 bushels per acre, respectively. The five highest yielding entries in 1954 were Park, Sauk, Clinton x Overland²; C.I. 5346, (V-R) x Bannock; C.I. 3865, and (Bond - Anthony) X (Iogold x V-R): C.I. 6612, producing 147.7, 137.3, 136.9, 136.7, and 134.2 bushels per acre, respectively. The five lowest yielding entries were Clintland, Waubay, Clintafe, Jackson, and Clarion, which produced from 100.3 to 117.9 bushels per acre. Cody ranked 11th, and Overland ranked 18th in the 1954 experiment. Shasta, at 137.3 bushels per acre, again produced more grain than Roxton which averaged 124.8 bushels.

Craig, Fortune, Exeter, Sauk, Simcoe, and Improved Garry were the only oats from other areas that ranked among the top half in yields in 1954. Park, the only oat producing average yields above 140 bushels per acre, was more than ten bushels per acre above the No. 2 variety, Sauk. The check varieties Markton, Carleton, Victory, and Shelby produced yields of 133.1, 125.0, 122.4, and 119.5 bushels per acre, respectively.

Test Weight

Data on weight per bushel were reported from 10 stations in 1954. The average test weights ranged from a high of 39.2 for Jackson, C.I. 5441, to a low of 34.9 for Victoria x Richland x Bannock, C.I. 3865. The heaviest oats were grown at Hesperus and Lower Klamath Falls, where the average test weights were 38.8 and 38.7 pounds, respectively. The five heaviest oats, Jackson, Rodney, Clinton x Overland²; C.I. 5346, and Improved Garry, tested 38 or more pounds per bushel, all being above the Victory check, which tested 37.3 pounds per bushel. Only one selection, namely 5346, from the crosses C.I. 4189 x Overland and Clinton x Overland² was equal to Bannock and Victory, the heaviest check varieties. Varieties or selections from the Clinton x Marion cross have very high quality. Cody, Fortune, Roxton, and selections from Andrew x Clinton cross are equal to or better than Carleton, the lightest check. (V-R) x Bannock, C.I. 3865 was the only oat with lighter grain than Carleton.

Plant Height

Data on Plant height were recorded at nine stations in 1954. Oats grew the tallest at Prosser, Logan, and Klamath Falls, where the average heights were 48.0, 47.6 and 45.7 inches, respectively. The average plant height in 1954 was below that of 1953. The shortest oats were grown at Ft. Collins where hot weather and drought were limiting factors. The crop at Laramie had no water and would have been even shorter, had it been measured.

Roxton, Shasta, Fortune, Victory, and Markton were the tallest oats grown in the test, ranging from 49.4 to 42.8 inches in height. All varieties from Canada grew taller than is desired for most of this area.

Standing Ability

Lodging was reported from four stations in 1954. Very severe lodging was reported in some varieties at Prosser. A heavy infection of mildew was observed in a few lodged rows but this is thought to be a mere coincidence.

The data on lodging of irrigated and non-irrigated stations are included in Table 26. Four irrigated stations reported lodging in 1954.

The six entries having less than 10 percent lodging on irrigated stations were Clinton x Overland²; C.I. 5346, Waubay, Clintland, Clarion, Clintafe, and Overland. Of these, C.I. 5345 and Overland are the only two that produce satisfactory yields in this region. Eight entries have quite weak straw and had more than 30 percent lodging. They are Bannock, Roxton, Victory, Shasta, C.I. 3865, Markton, Cody and Fortune.

Date Headed

Data on date of heading were received from nine stations in 1954. Oats headed in late May or June at each station except Klamath Falls and Bozeman. The latest nursery was that at Lower Klamath where the average date of heading was July 22. The Ontario nursery was the earliest, and there all entries were headed by June 14, with average date of June 5. The very early entry, Clintland, headed June 21, as an average for all stations. This was nearly two weeks earlier than Shasta and Roxton, which both headed July 4. Park, Shasta, Victory, and Bannock are the latest oats being grown on farms in the northwest, their heading date averaging July 1 or later.

Date Ripe

No data were reported on date of ripening of oats grown on the irrigated stations, except from Hesperus, Colo., which appears in Table 28.

Disease Resistance

Stem rust developed too late in the season at Aberdeen to make accurate readings. One plot of Markton had nearly 100 percent infection--much heavier than ever reported at Aberdeen before. Stem rust also was observed in eastern Wyoming and Colorado. Halo blight readings were reported from Bozeman, and red leaf readings, from Laramie.

Table 21. Entries Included in Uniform Northwestern States Nursery grown in 1954.

Variety	C.I. No.	Source	Origin
Markton	2053	Selection from C.I. 357 Intro. from Turkey	Check
Cody	3916	(Victoria x Richland) x Bannock	Wyoming and Washington *
Bannock	2592	Markton x Victory	•
Victory	1145	Selection from Milton	Check
Carleton	2378	Sixty Day x Markton	Check
Overland	4181	(Victoria x Richland) x Bannock	Check
(V-R) x Bannock	3865	(Victoria x Richland) x Bannock	•
Shelby	4372	Anthony x Bond	•
Andrew	4170	Bond x Rainbow	Check
Ajax	4157	Victory x Hajira	Winnipeg
Fortune	5226	Victory x (Victoria-Richland x Bannock)	Saskatchewan
Branch	5013	Forward x (Victory x Richland) x Forward	Wisconsin
Clinton x Overland ²	5345	Clinton x Overland ²	•
Clinton x Overland ²	5346	Clinton x Overland ²	•
C.I. 4189 x Overland	5347	(Bond x Anthony) x Overland	•
Andrew x Clinton	5657	Andrew x Clinton	•
(V-R) x Columbia; Mo. -O-205	4988	(Victoria x Richland) x Columbia	Missouri
Andrew x Clinton	5658	Andrew x Clinton	•
Park	6611	(Clinton x Overland) x Overland	Montana
(B-A) x (Logold x V-R)	6612	(Bond x Anthony) x (Logold x Victoria-Richland)	Idaho
C.I. 4189 x Overland	6613	(Bond x Anthony) x Overland	Idaho
Jackson	5441	Clinton x Marion	Michigan
Clintafe	5869	Clinton x Santa Fe	Iowa
Roxton	4134	(Siberian x Joannette) x (OAC No. 72 x Early Ripe)	Quebec
Exeter	4158	Victory x Rusota	Winnipeg
Craig	5332	Ithacan x Victoria	New York
Clarion	5647	Clinton x Marion	Maine
Sauk	5946	(Forward x Victoria-Richland) x Andrew	Wisconsin
Rodney	6661	(Victoria x Hajira-Banner) x Roxton	Winnipeg
Clintonland	6701	Landhafer x Clintonland ⁴	Indiana
Waubay	5440	Clinton x Marion	South Dakota
Simcoe	6767	Ajax x Erban	Guelph
Improved Garry	6662	Victory x (Victoria x Hajira -Banner)	Winnipeg

* U.S.D.A. and Cooperating States

Table 22. Summary data obtained on the Uniform Northwestern States Nursery grown on Irrigated stations in 1954

Rank in Yield	C.I. No.	Variety or Selection	1954 Acre Yield (8 stations) bushels	Bushel Weight (10 Sta.) pounds	Plant Height (9 Sta.) inches	Lodging (4 Sta.) percent	Date Head (9 Sta.)
1	6611	Park	147.7	37.1	39.3	12.5	7/ 2
2	5946	Sauk	137.3	37.2	39.1	21.2	6/26
3	5346	Clinton x Overland ²	136.9	38.0	38.5	10.7	6/30
4	3865	(V-R) x Bannock	136.7	34.9	37.0	35.2	6/27
5	6612	(B-A) x (Iogold x V-R) ^{1/}	134.2	37.1	35.7	23.7	6/28
6	6613	C. I. 4189 x Overland	133.3	37.0	39.4	19.5	7/ 1
7	2053	Markton	133.1	36.8	42.8	34.7	6/29
8	6767	Simcoe	132.5	37.6	42.7	29.0	6/27
9	5332	Craig	132.2	36.3	34.3	25.0	6/26
10	4158	Exeter	132.1	37.3	41.7	17.2	7/ 3
11	3916	Cody	131.9	35.9	34.3	33.7	6/28
12	3976	Shasta	131.8	36.9	45.8	37.0	7/ 4
13	5345	Clinton x Overland ²	130.3	37.0	38.4	3.2	6/30
14	5226	Fortune	130.1	36.6	44.1	31.0	6/29
15	2592	Bannock	128.6	37.3	42.1	47.0	7/ 1
16	5347	C.I. 4189 x Overland	127.5	37.2	39.9	12.7	6/30
17	6662	Improved Garry	127.3	38.0	42.3	15.0	6/28
18	4181	Overland	126.2	36.8	35.7	9.0	6/27
19	4157	Ajax	125.9	37.2	41.7	15.2	6/28
20	5013	Branch	125.8	37.5	41.8	26.5	7/ 1
21	2378	Carleton	125.0	35.4	37.9	28.0	6/26
22	4134	Roxton	124.8	36.2	49.4	46.0	7/ 4
23	4170	Andrew	124.2	37.3	37.0	19.7	6/21
24	5658	Andrew x Clinton	123.1	36.4	39.0	27.7	6/24
25	1145	Victory	122.4	37.3	43.9	38.0	7/ 3
26	5657	Andrew x Clinton	121.8	36.0	35.9	12.0	6/24
27	4988	Mo. 0-205	121.5	37.9	39.4	18.7	6/22
28	4372	Shelby	119.5	39.0	41.0	16.2	6/26
29	6661	Rodney	119.3	38.6	42.1	28.5	7/ 1
30	5647	Clarion	117.9	37.7	37.7	6.5	6/22
31	5441	Jackson	116.7	39.2	39.5	24.7	6/26
32	5869	Clintafe	114.9	36.7	37.8	8.5	6/26
33	5440	Waubay	112.0	37.8	38.3	4.5	6/24
34	6701	Clintland	100.3	37.0	34.8	5.2	6/21

^{1/} (Bond x Anthony) x (Iogold x Victoria-Richland)

Table 25. Plant height of oats included in the Uniform Northwestern States Nursery grown on Irrigated stations in 1954.

C. I. no.	Variety, hybrid, or selection	Average stations	Bozeman, Montana	Ft. Collins, Colorado	Hesperus, Colorado	Aberdeen, Idaho	Logan, Utah	Prosser, Washington	Ontario, Oregon	Union, Oregon	Klamath Falls, Oregon
						inches					
2053	Markton	42.8	46	26	29	45	52	50	42	43	52
3916	Cody	34.3	37	19	26	36	41	45	33	34	38
2592	Bannock	42.1	45	25	32	44	52	46	41	42	52
1145	Victory	43.9	45	27	34	42	54	49	44	46	54
2378	Carleton	37.9	37	22	29	39	46	48	38	37	45
4181	Overland	35.7	36	21	26	37	44	44	35	37	41
3865	(V-R) x Bannock	37.0	41	22	23	34	45	46	38	38	46
4372	Shelby	41.0	41	25	32	44	48	48	40	42	49
4170	Andrew	37.0	39	22	27	37	45	47	40	39	37
4157	Ajax	41.7	45	27	33	42	48	51	42	41	46
5226	Fottune	44.1	46	26	32	44	53	54	43	46	53
5013	Branch	41.8	43	27	30	41	52	49	40	46	48
5345	Clinton x Overland ²	38.4	40	25	26	37	47	50	37	39	45
5346	Clinton x Overland ²	38.5	44	23	26	39	48	45	40	39	43
5347	C.I. 4189 x Overland	39.9	41	24	29	40	47	47	43	41	47
5657	Andrew x Clinton	35.9	37	20	28	38	41	47	38	37	37
4988	Mo. O-205	39.4	40	24	24	41	49	50	40	43	44
5658	Andrew x Clinton	39.0	40	23	29	39	46	48	39	43	44
6611	Park	39.3	45	24	27	37	44	45	42	40	46
6612	(B-A) x (Iogold x V-R) ^{1/}	35.7	37	22	26	36	44	44	36	37	39
6613	C.I. 4189 x Overland	39.4	40	23	30	40	47	46	41	41	47
5441	Jackson	39.5	41	24	30	41	47	46	39	42	46
5869	Clintafe	37.8	41	22	27	38	43	50	40	36	43
3976	Shasta	45.8	47	27	35	46	55	52	47	46	57
4134	Roxton	49.4	55	30	39	52	57	51	50	53	58
4158	Exeter	41.7	42	25	32	43	49	48	43	36	50
5332	Craig	34.3	36	19	26	34	41	41	34	36	42
5647	Clarion	37.7	38	21	26	38	46	48	39	41	42
5946	Sauk	39.1	41	24	29	40	47	43	42	43	43
6661	Rodney	42.1	42	36	33	42	50	51	39	45	50
6701	Clintland	34.8	36	20	25	39	41	43	37	39	33
5440	Waubay	38.3	40	24	28	38	46	50	37	42	40
6767	Simcoe	42.7	45	25	30	44	49	54	42	47	48
6662	Improved Garry	42.3	45	26	31	42	49	53	45	43	47
	Station average		41.6	23.8	29.0	40.3	47.6	48.0	40.2	41.4	45.7

^{1/} (Bond x Anthony) x (Iogold x Victoria-Richland)

Table 26. Percent of Lodging of oats included in the Uniform Northwestern Nursery grown on Irrigated and on Non-irrigated stations, 1954.

C.I. no.	Variety, hybrid, or selection	Irrigated					Non-irrigated			
		Average 4 stations	Bozeman, Montana	Hesperus, Colorado	Aberdeen, Idaho	Prosser, Wash.	Average 2 stations	Moscow, Idaho	Mt. Vernon, Wash.	
2053	Markton	34.7	13	1	50	75	40.0	40	40	
3916	Cody	33.7	23	0	24	88	42.5	25	60	
2592	Bannock	47.0	25	1	65	97	57.5	55	60	
11145	Victory	38.0	49	0	21	82	42.5	45	40	
2378	Carleton	28.0	19	2	31	60	67.5	95	40	
4181	Overland	9.0	11	0	12	23	29.0	18	40	
3865	(V-R) x Bannock	35.2	29	4	16	92	63.5	77	50	
4372	Shelby	16.2	7	0	35	23	42.5	45	40	
4170	Andrew	19.7	4	2	15	58	43.5	47	40	
4157	Ajax	15.2	12	0	26	23	33.5	37	30	
5226	Fortune	31.0	9	1	17	97	40.0	40	40	
5013	Branch	26.5	11	0	32	63	32.5	15	50	
5345	Clinton x Overland ²	3.2	3	0	7	3	27.5	15	40	
5346	Clinton x Overland ²	10.7	21	0	9	13	32.5	15	50	
5347	C.I. 4189 x Overland	12.7	3	0	18	30	55.0	70	40	
5657	Andrew x Clinton	12.0	25	2	18	3	30.0	20	40	
4988	Mo. O-205	18.7	8	1	26	40	55.0	80	30	
5658	Andrew x Clinton	27.7	6	1	17	87	53.5	77	30	
6611	Park	12.5	23	0	9	18	30.0	20	40	
6612	(B-A) x (Iogold x V-R) ^{1/}	23.7	22	0	13	60	32.5	25	40	
6613	C.I. 4189 x Overland	19.5	6	0	15	57	35.0	20	50	
5441	Jackson	25.0	24	1	19	55	35.0	20	50	
5869	Clintafe	8.5	5	0	19	10	52.5	55	50	
3976	Shasta	37.0	13	0	45	90	34.0	28	40	
4134	Roxton	46.0	38	5	48	93	27.5	15	40	
4158	Exeter	17.2	6	0	40	23	40.0	40	40	
5332	Craig	24.2	5	0	13	82	52.5	55	50	
5647	Clarion	6.5	6	0	20	0	50.0	50	50	
5946	Sauk	21.2	6	1	21	57	32.5	25	40	
6661	Rodney	28.5	5	2	22	85	27.5	25	30	
6701	Clintland	5.2	3	0	18	0	23.5	17	30	
5440	Waubay	4.5	3	1	14	0	22.0	14	30	
6767	Simcoe	29.0	9	3	44	60	47.5	55	40	
6662	Improved Garry	15.0	14	0	23	23	32.5	25	40	
	Station average		13.4	0.82	24.2	49.1		38.4	41.8	
	^{1/} (Bond x Anthony) x (Iogold x Victoria-Richland)									

Table 27. Date of heading of oats included in the Uniform Northwestern States Nursery grown on Irrigated Stations in 1954.

C. I. no.	Variety, hybrid, or selection	Average stations	Bozeman, Montana	Fort Collins, Colorado	Hesperus, Colorado	Aberdeen, Idaho	Logan, Utah	Prosser, Washington	Ontario, Oregon	Union, Oregon	Klamath Falls, Oregon	Lower Klamath, Oregon
2053	Markton	6/29	7/10	6/27	6/26	6/23	6/20	6/15	6/5	6/7	7/20	7/23
3916	Cody	6/28	7/13	6/27	6/26	6/22	6/18	6/14	6/3	6/7	7/19	7/24
2592	Bannock	7/1	7/12	6/29	6/29	6/24	6/23	6/17	6/10	6/7	7/28	7/26
1145	Victory	7/3	7/14	7/1	7/1	6/23	6/26	6/16	6/8	6/6	7/27	7/28
2378	Carleton	6/26	7/6	6/26	6/22	6/21	6/17	6/19	5/30	6/26	7/18	7/20
4181	Overland	6/27	7/8	6/25	6/24	6/22	6/20	6/14	6/3	6/26	7/17	7/22
3865	(V-R) x Bannock	6/27	7/11	6/27	6/25	6/22	6/19	6/13	5/31	6/7	7/16	7/20
4372	Shelby	6/26	7/8	6/23	6/25	6/22	6/20	6/11	6/2	6/30	7/18	7/17
4170	Andrew	6/21	7/2	6/19	6/15	6/21	6/11	6/12	5/22	6/23	7/14	7/12
4157	Ajax	6/28	7/9	6/26	6/25	6/22	6/20	6/12	6/2	6/7	7/20	7/24
5226	Fortune	6/29	7/12	6/28	6/26	6/22	6/22	6/13	6/5	6/7	7/19	7/21
5013	Branch	7/1	7/12	6/27	6/28	6/24	6/24	6/16	6/6	6/7	7/25	7/28
5345	Clinton x Overland ²	6/30	7/12	6/28	6/29	6/23	6/22	6/17	6/6	6/7	7/19	7/27
5346	Clinton x Overland ²	6/30	7/13	6/29	6/28	6/24	6/25	6/16	6/8	6/7	7/17	7/18
5347	C.I. 4189 x Overland	6/30	7/12	6/27	6/27	6/24	6/22	6/16	6/7	6/7	7/23	7/26
5657	Andrew x Clinton	6/24	7/4	6/23	6/20	6/21	6/16	6/7	6/2	6/26	7/14	7/18
4988	Mo. O-205	6/22	7/3	6/24	6/18	6/20	6/14	6/5	5/28	6/23	7/14	7/14
5658	Andrew x Clinton	6/24	7/4	6/23	6/21	6/20	6/16	6/7	5/29	6/26	7/16	7/19
6611	Park	7/2	7/14	6/29	6/28	6/25	6/26	6/17	6/9	6/7	7/22	7/26
6612	(B-A) x (Loggold x V-R) ^{1/2}	6/28	7/10	6/26	6/25	6/23	6/21	6/14	6/3	6/30	7/17	7/23
6613	C.I. 4189 x Overland	7/1	7/13	6/29	6/27	6/24	6/25	6/16	6/8	6/26	7/24	7/23
5441	Jackson	6/26	7/7	6/22	6/21	6/21	6/16	6/19	6/3	6/26	7/17	7/20
5869	Clintafe	6/26	7/7	6/24	6/22	6/21	6/16	6/11	6/5	6/26	7/18	7/22
2976	Shasta	7/4	7/15	7/1	7/2	6/27	6/25	6/18	6/14	7/7	7/25	7/27
4134	Roxton	7/4	7/15	6/30	7/2	6/28	6/26	6/17	6/13	6/7	7/28	7/26
4158	Exeter	7/3	7/14	6/30	6/30	6/26	6/25	6/16	6/10	6/7	7/25	7/27
5332	Craig	6/26	7/8	6/26	6/23	6/21	6/20	6/10	5/29	6/26	7/19	7/21
5647	Clarion	6/22	7/3	6/21	6/19	6/17	6/15	6/7	5/27	6/23	7/15	7/17
5946	Sauk	6/26	7/9	6/26	6/25	6/22	6/17	6/13	5/30	6/7	7/16	7/17
6661	Rodney	7/1	7/12	6/29	7/1	6/22	6/24	6/16	6/9	6/7	7/24	7/24
6701	Clintonland	6/21	7/2	6/20	6/17	6/16	6/15	6/4	5/26	6/23	7/14	7/17
5440	Waubay	6/24	7/4	6/23	6/20	6/17	6/16	6/8	5/29	6/26	7/15	7/17
6767	Simcoe	6/27	7/9	6/25	6/25	6/22	6/20	6/10	6/3	6/30	7/19	7/22
6662	Improved Garry	6/28	7/10	6/26	6/27	6/23	6/20	6/15	6/6	6/27	7/20	7/20
Station average			7/9	6/26	6/26	6/22	6/20	6/13	6/5		7/19	7/22

^{1/2} Union, Oregon, was not included in average.

Uniform Northwestern States Nursery Grown on Non-irrigated Stations

This nursery was grown on eleven stations in 1954, as follows:

Creston, Montana	Pullman, Washington
Havre, Montana	Mt. Vernon, Washington
Sheridan, Wyoming	Puyallup, Washington
Tetonia, Idaho	Pendleton, Oregon
Moscow, Idaho	Moro, Oregon
	Corvallis, Oregon

Data on nurseries grown on the above stations are included in Tables 29 to 33 inclusive. Additional data appear in Tables 26 and 28.

The two stations Creston and Puyallup were new cooperators in 1954. The entries in this nursery were the same as those in the irrigated test, and their derivation will not be repeated.

The nurseries at Moscow and Puyallup were badly damaged by rain and birds. Yield data, although recorded, were not used in calculating averages.

Yield differences needed for significance at the 5 % point were calculated for Sheridan and Pendleton which were 7.2 and 7.9 respectively. At Pendleton the difference for a 1% point was 22 bushels per acre.

At Puyallup 150 pounds of 6-20-20 fertilizer, and at Pendleton 34 pounds of nitrogen in the form of ammonium nitrate, was applied to the soil before seeding.

The crops on the three stations in the eastern part of the region were injured somewhat by drought. Excellent growth and yields were obtained in the western part.

Yield, Bushels per acre

Yields were reported from the eleven stations that grew the nursery in 1954, but only nine were included in the average. The highest average yields were reported from Pullman and Creston where the average of all entries was 127.9 and 123.2 bushels per acre, respectively. Yields of oats at these two stations were considerably above those produced on many of the irrigated stations.

Park was the highest yielding entry in both the irrigated and non-irrigated nurseries. The five highest yielding oats in the test were Park, Exeter, Rodney, Fortune, and Overland, which produced 74.7, 74.2, 73.9, 73.7, and 73.7 bushels per acre, respectively. Cody ranked sixth in the test in 1954 as compared to eighth in 1953. Clintland and other entries with Bond parentage from the North Central Region again were very low yielders. Andrew and Shelby have been the best of this group, and they have made a showing only when yields are low. Yields ranged from 74.7 bushels for Park down to 57.5 bushels per acre for Clintland.

Test Weight

Data on weight per bushel were recorded at seven stations in 1954. The average test weights of entries in 1954 were only slightly above those of 1953. The heaviest oats were grown at Pullman, where the average of all entries was 39.4; and the lightest were at Creston, 30.7 pounds per bushel. The five heaviest oats were Jackson, Shelby, Clintland, Waubay, and Rodney, ranging from 38.3 to 36.4 pounds per bushel; and were all equal to or above the Victory check. Fortune, Carleton, C.I. 3865, Roxton, C.I. 5657, Cody, and Shasta were the oats with low test weights, all being below 35.0 pounds per bushel.

Plant Height

Data on plant height were reported from ten stations in 1954. Oats in the region did not, on the average, grow as tall in 1954 as in 1953. The tallest oats were at Creston, where all entries averaged 48.7 inches in height. Oats at Moscow, Pullman, Mt. Vernon, and Puyallup also averaged above 40 inches. Roxton and Shasta, at 46.0 and 42.5 inches, respectively, were on the

average the tallest oats in the experiment and the only ones above the Victory check. Cody and Craig were the shortest oats grown, having plant heights of 32.2 and 32.3 inches, respectively. The Canadian varieties of oats in general were taller than the newer varieties being grown in the region.

Lodging

Data on lodging in 1954 were reported from only two stations, Moscow and Mt. Vernon, and were included in Table 26 of the previous nursery report.

There were no wide differences in percent of lodging at Mr. Vernon. The range at Moscow was from a high of 95 for Carleton to a low of 14 percent for Waubay. Branch, Clinton, x Overland², C.I. No.'s 5345, and 5346, and Roxton also had very good straw at Moscow.

Date Heading

The date of heading was recorded at nine stations in 1954. Oats headed latest at Mt. Vernon, where the average for all entries was August 4. Oats were earliest at Moro and Corvallis, where all entries averaged June 23. Oats on the average headed later at the non-irrigated stations than on the irrigated stations. The range in entries varied from July 12 for the late oats, Shasta and Victory, to June 30 for the earliest entry, Andrew. There appears to be little or no correlation between date of heading and yield except that none of the very early oats in the test were high in yield, but the latest headings were not the highest in yield either.

Date Ripe

Data on date of ripening were reported from three stations in 1954. Data for these stations are presented in Table 28 of Northwestern Region report. The maturity ranged from August 21 for Shasta, the latest variety, to August 10 for the early entries Andrew, Jackson, Clintafe, Mo. O-205, Clarion and Clintland. Here, as in the case of date of heading, the most widely grown oats in the area fell between the two extremes.

Disease Resistance

There were no diseases of oats reported from the non-irrigated stations.

Forage

Oats on the dryland areas of Oregon often are grown in hay strips around the boarder of wheat fields. Forage weights were taken at the Moro station. The tonnage ranged from a high of 3.32 for Shasta to 2.13 tons for the lowest, Sauk.

Table 29. Summary data obtained on the Uniform Northwestern States Nursery grown on Non-irrigated stations in 1954

Rank in Yield	C.I. No.	Variety or Selection	1954 Acre Yield (9 stations) bushels	Bushel Weight (7 Sta.) pounds	Plant Height (10 Sta.) inches	Lodging (2 Sta.) percent	Date Head (9 Sta.)
1	6611	Park	74.7	35.7	35.1	30.0	7/ 8
2	4158	Exeter	74.2	35.1	38.2	40.0	7/11
3	6661	Rodney	73.9	36.4	38.1	27.5	7/ 9
4	5226	Fortune	73.7	34.0	39.3	40.0	7/ 8
4	4181	Overland	73.7	35.6	34.7	29.0	7/ 7
6	3916	Cody	72.9	34.6	32.2	42.5	7/11
7	5347	C.I. 4189 x Overland	72.8	35.5	36.6	55.0	7/ 8
8	6612	(B-A) x (Logold x V-R) ¹ / _I	71.9	35.8	33.9	32.5	7/ 8
9	6613	C.I. 4189 x Overland	71.8	35.4	36.8	35.0	7/10
10	5332	Craig	70.9	35.4	32.3	52.5	7/ 8
10	5657	Andrew x Clinton	70.9	34.6	35.3	30.0	7/ 2
12	2592	Bannock	70.8	35.7	39.2	57.5	7/11
13	3865	(V-R) x Bannock	70.2	34.4	33.9	63.5	7/ 8
13	6662	Improved Garry	70.2	35.3	39.1	32.5	7/ 9
13	5346	Clinton x Overland ²	70.2	35.6	35.7	32.5	7/10
16	1145	Victory	69.6	36.4	41.8	47.5	7/12
17	3976	Shasta	69.4	34.9	42.5	34.0	7/ 2
17	5013	Branch	69.4	35.7	38.6	32.5	7/ 9
19	5345	Clinton x Overland ²	67.7	35.4	35.9	27.5	7/10
20	6767	Simcoe	67.3	35.8	40.1	47.5	7/ 7
21	5658	Andrew x Clinton	67.0	35.3	36.4	53.8	7/ 4
22	2053	Markton	66.7	35.6	38.6	40.0	7/ 8
23	4134	Roxton	66.0	34.4	46.0	32.5	7/10
24	4157	Ajax	65.7	35.7	40.1	33.5	7/ 8
25	4372	Shelby	65.6	37.3	38.6	47.5	7/ 8
26	2378	Carleton	65.5	34.3	34.1	67.5	7/ 6
27	5441	Jackson	65.0	38.3	37.8	35.0	7/ 5
28	5869	Clintafe	64.7	35.6	35.6	52.5	7/ 6
29	5946	Sauk	64.0	34.8	37.1	32.5	7/ 8
30	4170	Andrew	62.2	35.9	36.5	43.5	6/30
31	5647	Clarion	61.3	36.3	36.4	50.0	7/ 3
31	4988	Mo.-O-205	61.3	35.9	37.1	55.0	7/ 2
33	5440	Waubay	60.3	36.7	36.8	22.0	7/ 4
34	6701	Clintland	57.5	36.9	35.2	23.8	7/ 1

¹/ (Bond x Anthony) x (Logold x Victoria-Richland)

Table 30. Yields of oats included in the Uniform Northwestern States Nursery grown on Non-irrigated stations in 1954.

C. I. no.	Variety, Hybrid or Selection	Average stations	Rank stations	Creighton, Montana	Haure, Montana	Sheridan, Wyoming	Tetonas, Idaho	Moscow, Idaho	Pullman, Washington	Mt. Vernon, Washington	Puyallup, Washington	Pendleton, Oregon	Moro, Oregon	Corvallis, Oregon
Bushels per acre														
$\frac{2}{\sqrt{}}$														
2053	Markton	66.7	22	151.2	42.2	21.8	32.7	90.0	133.3	33.3	95.3	87.5	51.9	46.5
3916	Cody	72.9	6	138.3	41.3	24.4	30.9	85.0	138.2	49.6	76.8	100.9	76.0	56.5
2592	Bannock	70.8	12	145.9	40.5	21.1	32.7	75.0	143.1	37.6	95.9	85.3	69.7	61.8
1145	Victory	69.6	16	148.1	43.3	20.1	26.8	90.0	138.6	45.6	77.3	83.8	67.3	53.0
2378	Carleton	65.5	26	117.5	36.3	26.8	39.3	82.0	135.1	31.6	89.4	90.7	61.1	51.4
4181	Overland	73.7	4	166.7	44.0	25.3	33.5	83.0	129.0	51.0	101.6	90.6	61.6	61.8
3865	(V-R) x Bannock	70.2	13	147.6	41.4	18.5	29.6	68.0	127.4	59.0	107.8	89.4	63.0	56.2
4372	Shelby	65.6	25	136.6	43.1	25.0	37.0	60.0	124.0	40.0	63.6	87.4	51.4	46.2
4170	Andrew	62.2	30	109.5	44.0	28.6	34.6	97.0	118.8	39.3	50.9	79.4	52.1	53.5
4157	Ajax	65.7	24	138.3	44.0	22.0	41.8	109.0	118.4	52.3	74.1	77.6	48.3	49.0
5226	Fortune	73.7	4	143.2	46.1	25.6	37.6	88.0	142.6	58.3	92.1	84.4	67.0	58.6
5013	Branch	69.4	17	151.6	45.5	24.9	32.2	86.0	129.3	52.6	88.0	78.4	51.6	58.6
5345	Clinton x Overland ²	67.7	19	131.2	45.7	22.4	30.7	78.0	124.3	50.0	98.4	89.0	64.3	52.2
5346	Clinton x Overland ²	70.2	13	146.3	47.8	30.8	26.3	61.0	122.3	45.6	90.0	94.2	65.4	53.0
5347	C.I. 4189 x Overland	72.8	7	151.6	48.3	27.7	34.2	80.0	139.8	50.0	88.1	82.6	60.2	60.5
5657	Andrew x Clinton	70.9	10	134.3	46.0	26.8	38.8	90.0	130.6	41.6	91.9	97.4	71.2	51.4
4988	Mo. O-205	61.3	31	109.1	38.3	29.0	40.6	89.0	120.7	34.6	63.0	70.2	56.0	53.7
5658	Andrew x Clinton	67.0	21	145.0	41.8	27.6	40.3	100.0	132.0	37.0	82.1	80.4	45.7	53.3
6611	Park	74.7	1	154.3	46.1	22.8	31.3	94.0	133.3	63.6	97.4	92.9	67.1	61.4
6612	(B-A) x (Iogold x V-R) $\frac{1}{2}$	71.9	8	143.6	48.6	24.9	42.7	93.0	116.9	51.3	102.1	90.7	66.9	62.0
6613	C.I. 4189 x Overland	71.8	9	151.6	47.4	25.9	33.6	73.0	128.6	49.0	101.9	85.9	65.4	58.9
5441	Jackson	65.0	27	129.9	46.6	23.9	34.7	107.0	116.0	53.3	70.4	76.5	52.5	51.3
5869	Clintafe	64.7	28	126.8	36.0	21.8	24.7	71.0	111.2	42.0	81.6	74.9	57.5	87.3
3976	Shasta	69.4	17	130.3	35.8	23.4	23.2	111.0	140.9	27.6	83.1	97.5	79.8	66.3
4134	Roxton	66.0	23	134.8	33.2	23.5	28.2	102.0	132.1	48.0	84.8	82.5	54.7	56.9
4158	Exeter	74.2	2	155.6	51.0	24.1	29.8	72.0	143.8	67.0	102.4	87.3	56.0	53.0
5332	Craig	70.9	10	136.6	47.2	30.5	39.2	93.0	135.5	37.0	85.6	90.0	74.4	47.7
5649	Clarion	61.3	31	110.4	50.0	17.2	41.9	60.0	108.9	42.6	43.6	91.3	50.9	38.3
5946	Sauk	64.0	29	125.0	48.8	24.6	35.6	102.0	114.1	39.6	77.1	89.0	52.6	46.8
6661	Rodney	73.9	3	149.0	39.6	17.6	27.5	102.0	144.0	77.6	94.3	85.8	66.6	57.8
6701	Clintland	57.5	34	98.7	43.8	15.9	45.0	81.0	101.8	45.3	45.8	73.7	53.8	39.3
5440	Waubay	60.3	33	112.6	41.9	13.8	35.5	81.0	102.3	47.0	40.6	84.5	62.7	42.1
6767	Simcoe	67.3	20	117.0	41.0	23.4	37.7	81.0	135.6	57.6	84.6	83.3	55.2	55.2
6662	Improved Garry	70.2	13	129.5	47.8	23.6	29.2	69.0	134.5	72.6	82.5	89.6	49.4	56.0
Station average				123.2	43.7	23.7	34.1	85.4	127.9	47.9	82.5	86.0	60.3	54.6

$\frac{1}{2}$ (Bond x Anthony) x (Iogold x Victoria-Richland)
 $\frac{2}{\sqrt{}}$ Data not included in average

Table 31. Bushel weight of oats included in the Uniform Northwestern States Nursery grown on Non-irrigated stations in 1954.

C.I. No.	Variety, hybrid, or selection	Average 7 stations	Creighton, Montana	Haute, Montana	Moscow, Idaho	Pullman, Washington	Pendleton, Oregon	Moro, Oregon	Corvallis, Oregon
							Pounds		
2053	Markton	35.6	32.0	34.6	35.1	37.3	35.3	39.1	36.1
3916	Cody	34.6	29.0	32.8	32.0	39.1	35.1	38.2	35.8
2592	Bannock	35.7	31.0	33.1	33.7	39.7	35.9	38.3	38.4
1145	Victory	36.4	32.0	33.1	36.5	40.8	37.5	37.7	37.5
2378	Carleton	34.3	29.0	33.0	34.3	37.4	35.1	36.9	34.8
4181	Overland	35.6	32.0	33.1	33.5	39.9	36.7	37.2	36.6
3865	(V-R) x Bannock	34.4	32.0	31.9	31.3	39.3	34.6	36.0	36.3
4372	Shelby	37.3	33.0	36.7	36.0	42.2	38.6	38.7	36.3
4170	Andrew	35.9	28.0	35.7	38.0	39.2	37.3	38.1	35.1
4157	Ajax	35.7	31.0	32.1	36.2	39.8	34.8	39.6	36.3
5226	Fortune	34.0	31.0	30.2	31.8	38.7	34.2	36.4	36.1
5013	Branch	35.7	31.0	31.6	34.5	39.4	36.6	38.5	38.4
5345	Clinton x Overland ²	35.4	32.0	32.3	35.1	40.7	35.9	35.2	36.4
5346	Clinton x Overland ²	35.6	33.0	31.3	32.8	40.4	37.5	38.5	36.1
5347	C.I. 4189 x Overland	35.5	30.0	32.2	36.2	39.8	35.5	37.5	37.4
5657	Andrew x Clinton	34.6	31.0	33.2	32.0	37.7	36.0	36.9	35.2
4988	Mo. 0-205	35.9	32.0	34.6	37.0	40.2	37.2	35.1	35.3
5658	Andrew x Clinton	35.3	30.0	32.7	34.3	39.1	35.8	39.0	36.0
6611	Park	35.7	31.0	32.0	35.8	40.3	36.8	36.9	37.1
6612	(B-A) x (Iogold x V-R) ^{1/}	35.8	33.0	32.8	31.7	40.0	37.3	39.2	36.9
6613	C.I. 4189 x Overland	35.4	33.0	31.6	36.0	38.8	35.1	37.3	36.1
5441	Jackson	38.3	35.0	36.2	38.3	41.2	38.6	40.9	37.8
5869	Clintafe	35.6	31.0	33.9	35.4	38.7	35.1	38.1	37.3
3976	Shasta	34.9	36.0	31.3	33.7	38.3	35.2	36.8	32.8
4134	Roxton	34.4	32.0	32.5	35.6	37.0	33.3	35.7	34.5
4158	Exeter	35.1	33.0	30.6	32.6	39.4	35.9	37.2	37.2
5332	Craig	35.4	34.0	31.5	34.0	39.2	35.4	39.0	34.6
5647	Clarion	36.3	32.0	34.7	37.5	39.3	37.4	38.1	35.0
5946	Sauk	34.8	28.0	33.7	34.6	39.4	36.5	36.5	34.9
6661	Rodney	36.4	33.0	35.3	36.5	40.1	36.7	36.0	37.2
6701	Clintland	36.9	33.0	36.6	37.5	39.4	36.6	38.6	36.7
5440	Waubay	36.7	32.0	36.0	37.5	39.4	38.0	38.8	35.3
6767	Simcoe	35.8	31.0	32.3	36.0	39.3	36.9	37.7	37.5
6662	Improved Garry	35.3	30.0	32.1	35.7	39.8	35.6	37.3	36.7
	Station average		30.7	32.2	35.0	39.4	36.2	37.7	36.2
	^{1/} (Bond x Anthony) x (Iogold x Victoria-Richland)								

Table 32. Plant height of oats included in the Uniform Northwestern States Nursery grown on Non-irrigated stations in 1954.

C. I. no.	Variety, hybrid, or selection	Average 10 stations	Montana, Creston,	Montana, Havre,	Sheridan, Wyoming,	Moscow, Idaho,	Pullman, Washington,	Mt. Vernon, Washington,	Puyallup, Washington,	Pendleton, Oregon,	Moro, Oregon,	Corvallis, Oregon,
2053	Markton	38.6	51	27	25	44	43	48	45	40	30	33
3916	Cody	32.2	43	21	24	40	37	42	34	30	25	26
2592	Bannock	39.2	54	27	25	48	44	48	42	39	31	34
1145	Victory	41.8	56	28	28	50	47	52	46	42	33	36
2378	Carleton	34.1	45	25	25	36	41	42	38	34	27	28
4181	Overland	34.7	47	24	24	44	38	44	38	32	26	30
3865	(V-R) x Bannock	33.9	46	25	25	38	38	42	37	33	25	30
4372	Shelby	38.6	51	28	30	46	42	48	42	38	30	31
4170	Andrew	36.5	47	28	27	40	43	46	40	36	26	32
4157	Ajax	40.1	52	28	26	52	46	49	46	39	31	32
5226	Fortune	39.3	52	28	29	50	47	39	42	40	33	33
5013	Branch	38.6	54	29	29	46	44	43	42	37	30	32
5345	Clinton x Overland ²	35.9	47	25	25	44	41	48	37	34	28	30
5346	Clinton x Overland ²	35.7	46	24	26	44	40	46	37	35	29	30
5347	C.I. 4189 x Overland	36.6	49	26	28	44	42	42	40	36	28	31
5657	Andrew x Clinton	35.3	44	27	27	36	40	44	40	34	28	33
4988	Mo. O-205	37.1	47	27	29	40	43	48	45	36	26	30
5658	Andrew x Clinton	36.4	47	29	29	40	43	38	44	37	28	29
6611	Park	35.1	47	24	25	44	40	43	38	34	26	30
6612	(B-A) x (Iogold x V-R)1/	33.9	42	24	23	42	38	48	38	31	25	28
6613	C.I. 4189 x Overland	36.8	50	25	25	44	42	46	41	36	28	31
5441	Jackson	37.8	48	27	28	46	43	46	41	38	29	32
5869	Clintafe	35.6	46	25	28	40	40	42	39	36	30	30
3976	Shasta	42.5	55	27	28	50	47	52	49	44	36	37
4134	Roxton	46.0	59	31	31	58	51	56	51	46	37	40
4158	Exeter	38.2	52	28	25	46	45	43	41	39	31	32
5332	Craig	32.3	44	21	25	42	38	40	36	29	24	24
5647	Clarion	36.4	45	29	28	44	42	48	38	36	29	27
5946	Sauk	37.1	49	27	26	46	43	46	39	36	27	32
6661	Rodney	38.1	51	28	25	46	45	44	42	38	31	31
6701	Clintland	35.2	41	27	27	40	39	48	41	34	27	28
5440	Waubay	36.8	46	28	28	44	42	42	46	34	29	29
6767	Simcoe	40.1	53	29	27	50	46	50	39	40	33	34
6662	Improved Garry	39.1	50	29	28	48	45	43	44	40	31	33
	Station average		48.7	26.6	26.6	44.5	42.5	45.5	41.1	36.6	29.0	31.1

1/ (Bond x Anthony) x (Iogold x Victoria-Richland)

SOUTH CENTRAL AND SOUTHWESTERN REGION

Weather conditions in the region as a whole were far better in 1954 than in 1953. Hot dry weather in June in the eastern part of the country hurt spring sown oats severely on some stations, but average yields there and in other parts of the region still were superior to those in 1953. Stem rust was less prevalent and damage less severe in 1954 than in 1953. As a result, disease was not much of a problem, and overall average yields were some ten bushels above those for the previous year. There was also less crown rust present in 1954 than in 1953; and as few oats susceptible to H. victoriae are still grown, damage from that disease was slight.

Uniform Spring Sown Red Oat Experiment

Only one spring-sown yield experiment was grown in 1954, the Uniform Spring Sown Red Oat Experiment. As in previous years, that was grown on stations in the so called "Border States" and in adjacent areas both to the north and the south. As in previous years, average yields for stations in each section are presented separately by areas, whereas other data are included in a single average in each case. Entries and pertinent information thereon appears in Table 34. Summary data obtained on this experiment in 1954 are included in Table 35, and Tables 36 to 43, inclusive, list the data from individual stations.

Stations receiving seed for growing this nursery in 1954 included the following:

Colo.	Akron	Md.	Beltsville
Ga.	Blairsville	Mo.	Columbia
	Experiment	Nebr.	Lincoln
Ind.	Lafayette	Ohio	Columbus
Iowa	Ames	Okla.	Stillwater
Kans.	Hays	Tex.	Denton
	Manhattan	Va.	Blacksburg
Ky.	Lexington		

In addition, observation or disease nurseries were grown at Aberdeen, Idaho, Ames, Iowa, and Manhattan, Kans.; and the strains were inoculated with a mixture of spores of stem rust races 7 and 8 at Beltsville, Md.

Because of a change in personnel at Columbus, Ohio, no report was received for that point. Also, no data were received from the station in North Carolina.

In 1954 the nursery included 28 entries, three less than 1953. The checks included were Andrew, Clinton "59", Kanota, Osage, and Columbia. Osage is grown as a check on the presence of H. victoriae; Clinton "59", to check straw strength; Andrew and Columbia, to check yields; and Kanota is the old-long-time check variety included to chart progress in oat breeding.

Yield, Bushels per Acre

As in the 1953 report, yield data were divided, and four averages appear. These are (1) the overall average for the 14 stations reporting yields; (2) average for the five stations in the East and South; (3) average for the six stations in the North Central states; and (4) average for the six stations in the Southwest. As Nebraska and Kansas usually are classed as in the Southwest, the yields from the Nebraska and Kansas stations are included in two averages: North Central and Southwest.

Data from the five stations in the East and South indicate average yields were much superior to those for 1953. The highest yielding entries in this area were Andrew, C. I. 4988 (Mo. O-205) and C. I. 6621. In the North Central Region yields were excellent in 1954, and the highest average yielders were C. I. Nos. 6632, 4988 (Mo. O-205) and 6620. All averaged some 82 bushels or more.

In the Southwest excellent yields were produced for that region, and the highest yielding entries there were C. I. Nos. 6620, 6632, and 6639. The overall average yields were 50 bushels or better in all except three cases. The top yielders were C. I. Nos. 6632, 4988 (Mo. O-205), and 6620. It will be noted that the highest ranking yields in all averages were for strains from the cross Andrew x Landhafer or Andrew parent.

Test Weight

Data on test weight were received from 12 stations. Test weights were low at Beltsville, Md., and Akron, Colo., and high at Lexington, Ky., Columbia, Mo., and Manhattan, Kans. On the average the highest test weights were recorded for C. I. Nos. 6730, 6927, and 6761. Although the Andrew x Landhafer entries yielded well, their test weights were rather low in most cases. Sunland gave the poorest test, 29.6 pounds per bushel.

Plant Height

Data on plant height were received from eight points, two less than in 1953. Except for Osage, all entries averaged 30 inches tall or taller. The tallest entries were C. I. Nos. 6600, 6649, and 4988. These three averaged in excess of 35 inches.

Standing Ability

Lodging was less severe in 1954 than in 1953, probably a result of less rust damage. Data were received from six stations in each year. Only one entry, C. I. 6730, had average lodging exceeding 40 percent. Other entries lodging 36 percent or more were C. I. Nos. 6621, 6632, and 4672. The latter was recently named Dupree. The least lodging was recorded for C. I. Nos. 6644 and 6927, which lodged 8.2 and 13.0 percent, respectively.

Date Headed

Data on date of heading were received from 11 stations. Oats headed earliest at Denton, Tex., and Stillwater, Okla., and latest at Lafayette, Ind., and Ames, Iowa. The latter stations are in the northern edge of the area where oats of the spring-sown red oat type are adapted. The earliest entry in 1954 was C. I. 6730, whereas the latest entries were Clintland and Clinton "59". The span in heading date was from May 28 to June 4 or six days.

Date Ripe

Data on date ripe were received from only three points, not a sufficient number for data to be conclusive; but the earliest entries were C. I. Nos. 6627, 6925, and 6927, whereas the last entry to ripen was Andrew.

Disease Resistance

Data on crown rust were received from Ames, Iowa, on seedlings made in both the greenhouse and field. Readings on Race 202 (new series) in the field indicated that C. I. Nos. 6620, 6701, and 6644 were highly resistant. Field readings at Ames indicated that a number of entries were more resistant than C. I. 6644 and slightly more resistant than C. I. 6701. Cimarron, C. I. 5106, was the most highly rusted in the field. Crown rust readings at Lafayette, Indiana, showed many entries to be highly susceptible. Andrew x Landhafer strains, Sunland, Seminole and C. I. 6649 were among the most resistant, whereas 6644, which appeared resistant to Race 202 at Ames, was the most susceptible. It appears that the races at Lafayette differed from those at Ames.

Stem rust data are available on field-grown plants from seven stations and from greenhouse seedlings of most of the entries at Ames, Iowa. Widely differing results were obtained in the different experiments. Variation doubtless was due

to the presence of different races at different points. Apparently, however, the most uniformly susceptible entry was Cimarron; whereas the other entries differed in their reaction depending on the races present. C. I. 6649 appeared to be among the most resistant strains.

Data on smut were obtained from Manhattan, Kansas. The most susceptible entries were Kanota and C. I. No. 6730, whereas a number of the entries had little or no smut even when inoculated with either the Fulton or Victoria smut races. At Ames, data were recorded on infection by septoria on leaf and stem. Seminole appeared to be somewhat more resistant than any of the other entries. Other than that, all were uniformly infected.

Table 34 . Entries included in the Uniform Spring Sown Red Oat Nursery grown in 1954.

C.I. No.	Variety or Hybrid	Selection	Seed Source 1/
839	Kanota	Mo. 01375	Check
2820	Columbia	Ab. 4318-7	Check
3991	Osage	Minn. II-33-21	Check
4170	Andrew	Iowa XM3218-35-1335-3-10	Check
4259	Clinton "59"	Iowa 37-20-2-82-1-10	Check
4301	Nemaha	Kans. 441665	Iowa
4672	Dupres: (Bond-Anthony) x (Richland-Fulghum)	Mo. 04205	Kansas
4988	Mo. 0-205: (Columbia x Victoria-Richland)	Okla. 472606	Missouri
5106	Cimarron: Woodward Composite	Mo. 04197	Okla.
5323	Mo. 0-205: (Columbia x Victoria-Richland)	Iowa 3846-24	Missouri
5444	Cherokee Reselection	Fla. Row 6514	Iowa
5924	Seminole: Appler x (Clinton ² - Santa Fe)	Fla. 12506	Florida
6000	Sunland: Fulghum x Landhafer	Ida. 3889-1	Florida
6620	Andrew x Landhafer	Ida. 3889-3	Md.
6621	Andrew x Landhafer	Mo. 04346	Md.
6625	Columbia x Marion	Mo. 04385	Missouri
6627	(Victoria-Richland x Columbia) x (Columbia-Bond)	Ida. 3876-2	Missouri
6631	Andrew x Landhafer	Ida. 3876-3	Md.
6632	"	Ida. 3887-2	"
6639	"	Purdue RA461A1-3-41-2	"
6644	Clinton ² x Ark. 674	Ida. 3665-5	Ind.
6649	Santa Fe x Bonham	Purdue B4916A3-4	Md.
6701	Clintonland	Miss. Delta 5-1060	Ind.
6730	(Lee-Victoria x Fulwin-Colo) x C.I. 5393	Mo. 04520	Miss.
6925	(Columbia x Victoria-Richland) x Mindo	Mo. 04534	Missouri
6926	(Columbia x Marion) x Mindo	Purdue 424A1-71-59	"
6927	Clinton x Boone-Cartier		Ind.

1/ The U. S. D. A. and in certain cases additional states cooperated in the production of many of these oats.

Table 35. Summary of data obtained on the Uniform Spring Sown Red Oat Experiment grown in 1954.

Rank in Yield	C.I. No.	Variety or Selection	Average Acre Yields				Average All Stations				Date Ripe (3 Sta)		
			Total Average (14 Sta) Bu.	East and South		North		Test Wt. (12 Sta) Lbs.	Plant Ht. (8 Sta) Ins.	Logg- ing (6 Sta) o/o			
				Rank (5 Sta) Bu.	1/ Bu.	Rank (6 Sta) Bu.	2/ Bu.					Rank (6 Sta) 3/ Bu.	
1	6632	Andrew x Landhafer	65.5	5	52.3	1	84.3	2	71.0	29.9	31.3	37.0	6/25
2	4988	Mo. O-205	65.3	2	55.1	3	82.5	4	67.9	32.2	35.1	22.3	25
3	6620	Andrew x Landhafer	64.8	6	51.8	3	81.9	1	71.5	31.7	33.0	29.6	25
4	6621	"	64.3	3	54.8	4	81.4	5	66.9	31.1	33.0	37.6	25
5	6639	"	63.7	4	53.9	7	79.8	3	68.1	31.2	33.4	30.4	25
6	4170	Andrew (check)	63.4	1	56.8	10	77.7	8	63.7	31.7	33.8	31.8	27
7	6631	Andrew x Landhafer	62.7	7	51.8	5	81.3	6	65.6	30.3	31.4	33.3	26
8	4572	(Bond-Anthony) x (Richland-Fulghum)	60.9	20	47.8	6	80.1	7	64.2	31.0	32.0	36.1	26
9	5323	Mo. O-205	60.7	14	49.7	9	78.5	9	63.2	31.9	34.5	17.4	25
10	6625	(Columbia x Victoria-Richland) x Mindo	60.4	19	47.8	8	78.5	10	61.2	32.8	33.9	18.0	25
11	6926	(Columbia x Marion) x Mindo	59.8	13	49.8	11	77.3	11	60.9	32.2	32.0	29.2	25
12	6627	(Victoria-Richland x Columbia) x (Columbia-Bond)	58.6	15	48.8	13	74.6	12	60.3	32.7	32.8	15.2	24
13	6761	(Columbia x Victoria-Richland) x Clinton	58.2	10	50.3	12	74.9	22	55.6	33.2	33.4	17.8	25
14	6927	Clinton x Boone-Cartier	57.9	8	50.6	17	72.3	16	57.5	33.2	32.1	13.0	24
15	4301	Nenabe	57.7	16	48.6	14	74.4	13	59.0	31.2	32.4	19.4	26
16	2620	Columbia (check)	57.0	11	50.2	19	71.7	18	58.8	31.7	34.6	29.8	26
17	5444	Cherokee Reselection	57.0	21	47.4	15	73.4	21	55.9	31.5	32.1	23.6	25
18	833	Kanota (check)	56.8	12	49.9	23	71.2	14	58.8	30.6	31.8	31.9	25
19	6644	Clinton x Ark. 674	56.7	17	48.1	16	72.9	20	56.1	31.7	32.3	8.2	25
20	6925	(Columbia x Victoria-Richland) x Mindo	56.4	9	50.6	22	71.3	24	53.3	32.7	33.6	28.1	24
21	6701	Clinton	55.3	22	46.9	24	70.7	17	56.9	32.0	32.9	28.8	25
22	6730	(Lee-Victoria x Fulwin-Colo) x C.I. 5393	54.3	26	43.2	18	72.1	19	56.7	33.8	31.9	43.8	25
23	3991	Osage (check)	52.6	27	41.3	21	71.6	15	57.6	30.7	29.1	35.5	25
24	4259	Clinton "59" (check)	52.4	23	46.9	20	71.7	27	48.5	31.1	31.8	18.5	25
25	5924	Seminole	51.4	25	44.1	26	64.6	25	53.2	30.7	31.4	29.9	25
26	6649	Santa Fe x Bonham	49.5	18	48.0	27	63.6	28	46.8	30.5	35.4	15.9	25
27	5106	Cimarron	48.9	28	39.7	25	65.6	26	51.8	28.4	30.5	20.7	25
28	6600	Sumland	48.2	24	45.5	28	57.2	23	53.4	29.6	35.5	33.2	25

1/ Beltsville, Md.; Blacksburg, Va.; Blairsville, Ga.; Experiment, Ga.; & Lexington, Ky.
 2/ Lafayette, Ind.; Ames, Iowa; Columbia, Mo.; Lincoln, Nebr.; Manhattan and Hays, Kans.
 3/ Lincoln, Nebr.; Manhattan and Hays, Kans.; Stillwater, Okla.; Denton, Tex.; & Akron, Colo.

Table 36. Yields on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Experiment grown in 1954

C.I. No.	Variety or Selection	Averages				Beltsville and Southern Stations				
		Average all 14 Stations	Average 3 East and South	Average 6 North Central	Average 6 Southwest	Maryland	Blacksburg, Virginia	Blacksburg, Georgia	Experiment, Georgia	Lexington, Kentucky
		Bushels				Bushels				
6620	Andrew x Landhafer	64.8	51.8	81.9	71.5	56.3	53.4	40.0	50.2	59.0
6621	"	64.3	54.8	81.4	66.9	53.8	58.6	55.0	53.6	53.2
6631	"	62.7	51.8	81.3	65.6	52.7	53.1	37.2	59.8	56.4
6632	"	65.5	52.3	84.3	71.0	45.4	47.6	53.1	58.9	56.7
4170	Andrew (check)	63.4	56.8	77.7	63.7	50.4	62.3	51.2	61.0	59.2
6639	Andrew x Landhafer	63.7	53.9	79.8	68.1	51.9	58.7	51.7	52.0	55.3
6701	Clintonland:	55.3	46.9	70.7	56.9	41.1	55.4	37.0	49.2	51.8
5924	Seminole: Appler x (Clinton ² - Santa Fe)	51.4	44.1	64.6	53.2	45.0	45.6	28.1	53.8	47.9
6600	Sunland: Fulghum 708 x Landhafer	48.2	45.5	57.2	53.4	34.5	52.1	46.5	54.0	40.6
4301	Nemaha	57.7	48.6	74.4	59.0	40.7	55.7	43.8	48.4	54.4
5444	Cherokee Reselection	57.0	47.4	73.4	55.9	48.2	57.1	39.5	45.8	46.6
6730	(Lee-Victoria x Fulwin-Colo) x C.I. 5393	54.3	43.2	72.1	56.7	35.4	56.0	35.8	40.4	48.4
4672	(Bond-Anthony) x (Richland-Fulghum): Dupree	60.9	47.8	80.1	64.2	41.8	61.1	37.5	35.1	63.6
5106	Cimarron: Woodward Composite	48.9	39.7	65.6	51.8	40.7	1/	8.1	38.8	54.5
4259	Clinton "59" (check)	52.4	46.9	71.7	48.5	36.2	59.6	36.0	44.0	58.6
839	Kenota (check)	56.8	49.9	71.2	58.8	51.8	56.3	39.2	40.4	61.9
3991	Osage (check)	52.6	41.3	71.6	57.6	50.8	49.7	21.0	44.4	40.5
4988	Mo. O-205: Columbia x (Victoria-Richland)	65.3	55.1	82.5	67.9	43.5	62.6	49.8	60.2	59.2
5323	"	60.7	49.7	78.5	63.2	39.9	61.4	31.7	50.9	64.8
6625	Columbia x Marion	60.4	47.8	78.5	61.2	39.9	55.8	40.0	44.2	59.2
6761	(Columbia x Victoria-Richland) x Clinton	58.2	50.3	74.9	55.6	38.3	58.0	39.1	55.8	60.3
6627	(Victoria-Richland x Columbia) x (Columbia-Bond)	58.6	48.8	74.6	60.3	43.5	60.5	41.3	49.6	49.1
6925	(Columbia x Victoria-Richland) x Mindo	56.4	50.6	71.3	53.3	44.3	60.2	56.0	48.8	43.6
6926	(Columbia x Marion) x Mindo	59.8	49.8	77.3	60.9	49.7	62.3	38.4	50.4	48.0
2820	Columbia (check)	57.0	50.2	71.7	56.8	35.8	55.3	34.3	62.0	63.4
6649	Santa Fe x Bonham	49.5	48.0	63.6	46.8	29.1	53.3	47.2	51.6	58.6
6644	Clinton ² x Ark. 674	56.7	48.1	72.9	56.1	44.4	56.0	39.7	51.6	49.0
6927	Clinton x Boone-Cartier	57.9	50.6	72.3	57.5	53.1	58.9	35.2	50.4	55.5

1/ Average of station (56.5) substituted for missing data.

Table 37. Yields on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Experiment grown in 1954.

C. I. No.	Variety or Selection	North Central Stations								Southwest Stations							
		Average Stations	Lafayette, Ind.	Ames, Iowa	Columbia, Mo.	Lincoln, Nebr.	Manhattan, Kans.	Hayes, Kansas	Average 6 Stations	Lincoln, Nebr.	Manhattan, Kans.	Hayes, Kans.	Stillwater, Okla.	Denton, Tex.	Akron, Colo.		
		Bushels								Bushels							
6620	Andrew x Landhafer	81.9	64.3	96.0	58.5	85.9	97.2	89.4	71.5	85.9	97.2	89.4	44.9	91.2	20.2		
6621	"	81.4	68.0	90.0	67.0	86.6	94.9	82.0	66.9	86.6	94.9	82.0	33.9	83.1	21.0		
6631	"	81.3	64.2	110.0	51.2	89.4	98.0	75.2	65.6	89.4	98.0	75.2	32.8	76.8	21.4		
6632	"	84.3	71.3	104.0	53.8	91.9	100.0	84.8	71.0	91.9	100.0	84.8	36.9	90.3	22.2		
4170	Andrew (check)	77.7	74.1	88.0	58.7	95.0	88.9	61.2	63.7	95.0	88.9	61.2	41.3	81.9	13.8		
6639	Andrew x Landhafer	79.8	65.4	93.0	55.3	88.6	100.8	75.8	68.1	88.6	100.8	75.8	45.7	84.3	13.6		
6701	Clinton ₂	70.7	66.1	90.0	42.1	73.7	93.2	58.8	56.9	73.7	93.2	58.8	22.7	84.3	8.5		
5924	Seminole; Appler x (Clinton ₂ - Santa Fe)	64.6	47.3	80.0	52.1	80.3	65.6	62.0	53.2	80.3	65.6	62.0	29.9	68.1	13.3		
6600	Sunland; Fulghum 708 x Landhafer	57.2	35.2	54.0	37.4	77.0	75.3	64.4	53.4	77.0	75.3	64.4	32.7	56.4	14.6		
4301	Nemaha	74.4	68.6	101.0	40.8	85.4	79.0	71.6	59.0	85.4	79.0	71.6	32.7	75.9	9.2		
5444	Cherokee Reselection	73.4	65.5	112.0	47.8	83.4	73.6	58.2	55.9	83.4	73.6	58.2	30.6	79.5	9.8		
6730	(Lee-Victoria x Fulwin-Colo) x C. I. 5393	72.1	62.4	79.0	63.0	88.0	69.7	70.6	56.7	88.0	69.7	70.6	28.8	69.9	13.4		
4672	(Bond-Anthony) x (Richland-Fulghum); Dupree	80.1	73.4	98.0	56.5	88.1	89.7	74.6	64.2	88.1	89.7	74.6	35.9	84.3	12.8		
5106	Cimarron; Woodward Composite	65.6	50.9	59.0	66.0	74.3	68.8	74.4	51.8	74.3	68.8	74.4	36.8	46.2	10.0		
4259	Clinton "59" (check)	71.7	67.6	88.0	53.3	79.8	78.2	63.2	48.5	79.8	78.2	63.2	30.7	30.0	8.8		
839	Kanota (check)	71.2	67.1	71.0	54.8	87.0	79.4	67.6	58.8	87.0	79.4	67.6	34.7	74.7	9.6		
3991	Osage (check)	71.6	34.7	93.0	56.5	93.6	93.2	58.8	57.6	93.6	93.2	58.8	31.3	54.0	14.6		
4988	Mo. O-205; Columbia x (Victoria-Richland)	82.5	78.0	97.0	56.6	96.4	99.6	67.4	67.9	96.4	99.6	67.4	36.2	91.5	16.0		
5323	"	78.5	73.2	94.0	54.1	94.5	90.6	64.6	63.2	94.5	90.6	64.6	34.4	79.2	15.8		
6625	Columbia x Marion	78.5	76.9	105.0	56.7	84.1	87.6	60.8	61.2	84.1	87.6	60.8	32.4	90.3	12.0		
6761	(Columbia x Victoria-Richland) x Clinton	74.9	71.4	97.0	60.7	85.3	79.4	55.8	55.6	85.3	79.4	55.8	30.5	67.5	15.0		
6627	(Victoria-Richland x Columbia) x (Columbia-Bond)	74.6	63.4	107.0	44.8	83.7	87.8	61.0	60.3	83.7	87.8	61.0	29.8	88.2	11.2		
6925	(Columbia x Victoria-Richland) x Minto	71.3	60.1	101.0	55.1	76.2	73.6	61.8	53.3	76.2	73.6	61.8	31.6	70.5	6.1		
6926	(Columbia x Marion) x Minto	77.3	76.2	95.0	51.7	83.4	85.0	72.6	60.9	83.4	85.0	72.6	33.0	76.2	15.2		
2820	Columbia (check)	71.7	70.6	83.0	52.4	80.1	81.0	63.0	56.8	80.1	81.0	63.0	29.4	72.6	14.9		
6649	Santa Fe x Bonham	63.6	49.8	72.0	51.0	77.0	84.1	48.2	46.8	77.0	84.1	48.2	24.2	37.8	9.2		
6644	Clinton ₂ x Ark. 674	72.9	62.5	104.0	50.0	78.8	79.1	63.2	56.1	78.8	79.1	63.2	34.2	67.5	14.0		
6927	Clinton x Boone-Cartier	72.3	56.5	94.0	61.4	83.6	73.4	65.4	57.5	83.6	73.4	65.4	38.6	75.0	8.9		

Table 38. Test weight on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat

Nursery grown in 1954

C.I. No.		Average 12 Stations	Beltsville, Md.	Blacksburg, Va.	Lexington, Ky.	Lafayette, Ind.	Ames, Iowa	Columbia, Mo.	Lincoln, Nebr.	Manhattan, Kans.	Hayes, Kans.	Stillwater, Oklahoma	Denton, Texas	Akron, Colo.
6620	Andrew x Landhafer	31.7	23.0	31.4	32.8	34.1	31.2	33.0	31.4	36.5	31.5	31.9	30.0	34.0
6621	"	31.1	22.0	30.6	32.1	34.0	31.1	33.5	31.8	36.6	32.0	31.0	30.0	28.0
6631	"	30.3	20.5	26.0	32.7	32.1	30.3	33.5	29.0	34.7	30.0	30.7	29.0	35.0
6632	"	29.9	23.0	27.9	31.9	31.8	28.7	30.0	28.3	34.5	29.0	28.8	31.0	34.0
4170	Andrew (check)	31.7	25.0	32.6	36.9	35.3	33.4	34.0	33.4	34.5	30.0	30.0	30.0	25.0
6639	Andrew x Landhafer	31.2	23.0	31.3	34.8	34.2	30.6	33.5	32.0	35.6	31.5	30.6	30.0	27.0
6701	Clinton	32.0	27.5	31.5	36.4	33.8	33.0	34.0	32.2	36.5	30.0	32.3	29.0	28.0
5924	Seminole: Appler x (Clinton ² - Santa Fe)	30.7	25.5	32.4	33.6	30.1	30.1	32.5	31.7	33.5	31.0	30.1	29.0	29.0
6600	Sunland: Fulghum 708 x Landhafer	29.6	21.0	28.9	34.0	28.8	27.7	32.0	29.6	35.2	31.0	33.1	28.0	26.0
4301	Nemaha	31.2	25.0	32.2	36.4	33.0	32.7	34.0	32.9	36.3	30.0	33.0	29.0	20.0
5444	Cherokee Reselection	31.5	25.0	32.3	36.3	32.8	31.7	35.5	33.4	36.7	30.0	32.1	30.0	22.0
6730	(Lee-Victoria x Fulwin-Colo) x C.I. 5393	33.8	28.5	32.5	37.3	33.7	32.4	38.5	33.8	37.9	35.0	36.1	31.0	29.0
4672	(Bond-Anthony) x (Richland-Fulghum): Dupree	31.0	26.0	31.2	35.3	31.4	31.0	34.5	31.6	36.0	30.0	30.5	29.0	26.0
5106	Cimarron: Woodward Composite	28.4	24.5	1/	34.1	28.3	20.9	33.5	28.8	34.2	29.5	30.0	28.0	18.0
4259	Clinton "59" (check)	31.1	26.5	31.3	36.3	33.3	31.6	36.0	32.2	34.4	29.0	31.8	2/	21.0
839	Kanota (check)	30.6	26.0	31.7	36.2	31.7	28.6	35.5	30.9	37.1	30.0	31.8	29.0	19.0
3991	Osage (check)	32.2	28.0	31.6	33.1	28.0	28.5	33.0	31.5	34.7	29.5	32.9	27.0	31.0
4988	Mo. O-205: Columbia x (Victoria-Richland)	32.2	28.0	31.9	37.2	33.6	31.9	32.5	33.5	35.6	29.5	29.0	31.0	33.0
5323	"	31.9	27.0	31.8	36.8	33.8	32.3	34.0	33.9	35.3	29.5	30.0	30.0	28.0
6625	Columbia x Marion	32.8	27.0	32.6	36.4	33.9	34.0	34.0	35.3	35.5	32.0	29.0	33.0	31.0
6761	(Columbia x Victoria-Richland) x Clinton	33.2	27.0	33.7	38.6	34.9	34.0	35.0	35.0	36.8	31.0	30.8	31.0	30.0
6627	(Victoria-Richland x Columbia) x (Columbia-Bond)	32.7	26.0	34.0	38.7	32.5	33.2	33.5	35.0	35.7	32.5	34.5	31.0	26.0
6925	(Columbia x Victoria-Richland) x Mindo	32.7	30.0	33.0	38.2	33.3	31.7	36.0	35.3	36.6	31.0	31.3	31.0	25.0
6926	(Columbia x Marion) x Mindo	32.2	28.0	32.8	35.4	33.3	31.0	31.0	32.6	35.2	31.0	34.2	30.0	32.0
2820	Columbia (check)	30.7	26.0	31.0	36.5	32.3	31.0	33.0	33.3	33.8	30.0	30.0	30.0	33.0
6649	Santa Fe x Bonham	30.5	22.0	27.9	36.2	38.8	31.0	32.0	32.2	34.5	31.5	30.2	2/	20.0
6644	Clinton ² x Ark. 674	31.7	27.5	31.0	35.4	34.0	31.6	33.5	32.7	35.8	30.0	32.0	28.0	29.0
6927	Clinton x Boone-Cartier	33.2	28.5	32.6	37.9	33.7	34.2	36.0	35.1	37.4	31.0	32.5	31.0	28.0

1/ Average of station (31.4) substituted for missing data.

2/ Average of station (29.8) substituted for missing data.

Table 39. Plant height on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Nursery

grown in 1954.

C.I. No.	Variety or selection	Average Stations	Beltsville, Md.	Lafayette, Ind.	Ames, Iowa	Columbia, Mo.	Lincoln, Nebr.	Manhattan, Kans.	Hays, Kans.	Stillwater, Colo.	Inches																																
											31	32	33	34	35	36	37	38	39	40	41	42																					
6620	Andrew x Landhafer	33.0	36	27	39	34	38	31	33	26	31	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1			
6621	"	33.0	37	27	39	33	38	29	34	27	31	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1			
6631	"	31.4	33	27	35	33	37	28	33	25	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1				
6632	"	31.3	32	28	35	33	36	29	33	24	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1				
4170	Andrew (check)	33.8	36	31	38	35	38	31	34	27	31	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1			
6639	Andrew x Landhafer	33.4	35	32	38	33	39	30	35	25	31	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1			
6701	Clinton	32.9	33	28	39	35	37	26	36	24	31	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1			
5924	Seminole: Appler x (Clinton ² - Santa Fe)	31.4	33	31	36	30	37	26	34	24	31	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1			
6600	Sunland: Fulghum 708 x Landhafer	35.5	39	33	40	34	40	30	38	30	38	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1			
4301	Nemaha	32.4	33	31	35	33	37	28	35	27	31	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1			
5444	Cherokee Reselection	32.1	33	30	37	32	37	28	34	26	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1					
6730	(Lee-Victoria x Fulwin-Colo) x C.I. 5393	31.9	34	28	38	32	38	27	34	24	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1						
4672	(Bond-Anthony) x (Richland-Fulghum): Dupree	32.0	34	30	35	31	38	29	34	25	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1				
5106	Cimarron: Woodward Composite	30.5	29	31	34	30	36	25	34	25	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1				
4259	Clinton "59" (check)	31.8	29	27	38	34	38	29	35	24	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1				
839	Kanota (check)	31.8	33	31	36	30	37	26	34	24	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1							
3991	Osage (check)	29.1	29	29	33	29	33	25	32	23	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1								
4988	Mo. O-205: Columbia x (Victoria-Richland)	35.1	33	33	39	37	40	32	38	29	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
5323	"	34.5	32	30	39	37	39	31	37	31	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1		
6625	Columbia x Marion	33.9	34	29	37	37	38	31	37	28	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1		
6761	(Columbia x Victoria-Richland) x Clinton	33.4	33	28	38	36	38	31	37	26	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1		
6627	(Victoria-Richland x Columbia) x (Columbia-Bond)	32.8	34	26	39	34	38	29	36	26	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1				
6925	(Columbia x Victoria-Richland) x Mindo	33.6	36	28	37	34	38	30	37	29	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1			
6926	(Columbia x Marion) x Mindo	32.0	33	28	37	33	37	28	35	27	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1					
2820	Columbia (check)	34.6	36	29	38	37	39	33	37	28	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
6649	Santa Fe x Bonham	35.4	34	34	41	36	41	32	39	26	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
6644	Clinton ² x Ark. 674	32.3	35	25	37	34	36	29	36	26	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
6927	Clinton x Boone-Cartier	32.1	35	27	36	33	36	28	36	26	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1					

Table 41. Date of heading on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Nursery grown in 1954.

C.I. No.	Variety or Selection	Average II Stations	Beltsville, Md.	Blacksburg, Va.	Lexington, Ky.	Lafayette, Ind.	Ames, Iowa	Date		Columbia, Mo.	Lincoln, Nebr.	Manhattan, Kans.	Hayes, Kans.	Stillwater, Okla.	Denton, Tex.
6620	Andrew x Landhafer	6-1	6-4	6-8	6-4	6-13	6-14	5-26	6-7	5-23	6-1	5-15	5-12		
6621	"	1	4	7	4	13	13	25	7	25	2	16	12		
6631	"	1	4	5	1	12	12	28	7	26	1	17	16		
6632	"	1	4	6	1	12	12	28	7	27	1	17	16		
4170	Andrew (check)	5-31	4	4	1	8	12	24	6	26	3	18	12		
6639	Andrew x Landhafer	6-1	4	6	2	13	13	26	6	25	1	17	12		
6701	Clinton	4	7	9	4	12	14	31	10	28	4	21	21		
5924	Seminole; Appler x (Clinton ² - Santa Fe)	2	4	5	2	13	12	31	7	27	2	16	18		
6600	Sunland; Fulghum 708 x Landhafer	5-31	4	6	2	16	18	24	6	22	5-26	10	12		
4301	Nemaha	31	4	5	1	8	12	26	6	24	6-3	18	14		
5444	Cherokee Reselection	31	4	4	1	8	12	26	6	25	4	18	14		
6730	(Lee-Victoria x Fulwin-Colo) x C.I. 5393	28	1	5	5-29	13	13	24	5	22	5-24	6	10		
4672	(Bond-Anthony) x (Richland-Fulghum) : Dupree	30	2	4	29	8	11	26	6	26	31	17	10		
5106	Cimarron; Woodward Composite	6-2	7	1/9	6-3	16	18	26	9	25	31	18	17		
4259	Clinton "59" (check)	4	9	7	3	12	14	6-1	9	28	6-5	20	23		
839	Kanota (check)	5-31	2	7	1	16	18	5-27	6	22	5-27	16	10		
3991	Osage (check)	6-2	4	9	1	12	14	27	7	26	6-4	18	16		
4988	Mo. O-205; Columbia x (Victoria-Richland)	2	5	9	5-31	14	14	27	7	28	3	19	12		
5323	"	2	5	9	30	14	13	25	7	28	3	21	12		
6625	Columbia x Marion	1	4	7	6-1	13	12	25	6	27	3	18	12		
6761	(Columbia x Victoria-Richland) x Clinton	1	4	8	5-31	13	12	25	7	27	1	18	16		
6627	(Victoria-Richland x Columbia) x (Columbia-Bond)	5-30	3	4	29	13	11	26	5	25	5-30	17	12		
6925	Columbia x Victoria-Richland x Mindo	29	1	3	29	8	11	24	5	23	27	14	12		
6926	(Columbia x Marion) x Mindo	6-1	4	6	6-2	12	12	24	6	25	31	18	16		
2820	Columbia (check)	1	5	7	5-30	13	12	27	7	27	6-2	21	10		
6649	Santa Fe x Bonham	1	5	4	6-1	12	11	25	7	25	5-31	18	20		
6644	Clinton ² x Ark. 674	1	5	7	1	8	12	25	7	27	31	19	20		
6927	Clinton x Boone-Cartier	5-29	1	2	5-30	6	10	24	5	25	30	14	10		

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1/ Average of station (6/7) substituted for missing data.

Table 42. Date of ripening on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat

Nursery grown in 1954.

C.I. No.	Variety or Selection	Average 3 Stations	Beltsville, Maryland	Lincoln, Nebr.	Stillwater, Okla.
6620	Andrew x Landhafer	6-25	6-30	7-2	6-11
6621	"	25	30	3	12
6631	"	26	30	3	14
6632	"	25	30	2	12
4170	Andrew (check)	27	30	4	15
6639	Andrew x Landhafer	25	30	2	12
6701	Clintonland	25	30	2	12
5924	Seminole: Appler x (Clinton ² - Santa Fe)	26	30	5	13
6600	Sunland; Fulghum 708 x Landhafer	25	29	4	11
4301	Nemaha	26	30	2	14
5444	Cherokee Reselection	25	30	1	13
6730	(Lee-Victoria x Fulwin-Colo) x C.I. 5393	25	28	2	13
4672	(Bond-Anthony) x (Richland-Fulghum); Dupree	26	28	4	14
5106	Cimarron; Woodward Composite	25	29	2	12
4259	Clinton "59" (check)	25	30	3	12
839	Kanota (check)	25	28	3	13
3991	Osage (check)	25	28	2	15
4988	Mo. O-205; Columbia x (Victoria-Richland)	25	29	1	14
5323	" ; "	25	29	2	13
6625	Columbia x Marion	25	29	1	14
6761	(Columbia x Victoria-Richland) x Clinton	25	29	2	12
6627	(Victoria-Richland x Columbia) x (Columbia-Bond)	24	28	2	12
6925	(Columbia x Victoria-Richland) x Mindo	24	28	3	11
6926	(Columbia x Marion) x Mindo	25	29	1	13
2820	Columbia (check)	25	30	1	13
6649	Santa Fe x Bonham	26	29	5	14
6644	Clinton ² x Ark. 674	25	28	2	14
6927	Clinton x Boone-Cartier	24	28	2	12

Table 43 . Reaction to diseases on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Nursery grown in 1954.

C. I. No.	Variety or Selection	Crown Rust			Smut 2/			Septoria 3/		Red Leaf		
		Ind. Lettayette,	Race 2021/	Ames, Iowa	Manhattan,	Kansas	Ames, Iowa	Leaf o/o	Stem o/o			
o/o	Reac.	Type	Coef.	No.	Leaf o/o	Stem o/o	Beltsville, Md.	Type				
6620	Andrew x Landhafer	2	HR	0	1	5	2	0	40	40	1	1
6621	" "	2	HR	1	1	2	0	0	40	40	1	1
6631	" "	2	HR	1	1	3	1	0	50	40	1	1
6632	" "	2	HR	1	1	4	1	0	40	30	1	1
4170	Andrew (check)	50	S	4	18	2	2	0	40	30	1	1
6639	Andrew x Landhafer	5	R	1	1	5	1	0	40	30	1	1
6701	Clintonland	10	R	0	2	1	15	5	40	30	1	1
5924	Seminole:Appler x(Clinton2 -Santa Fe)	2	HR	-	1	0	1	0	20	10	T	T
6800	Sunland:Fulghum 708 x Landhafer	T	HR	-	1	0	0	0	40	20	T	T
4301	Nemaha	10	R	4	16	8	7	0	50	40	1	1
5444	Cherokee Reselection	20	I	4	16	7	2	0	50	40	1	1
6730	(Lee-Victoria x Fulwin-Colo) x C. I. 5393	50	I	-	18	60	7	0	50	40	1	1
4672	(Bond-Anthony) x(Richland-Fulghum)	75	S	4	40	2	2	3	30	20	1	1
5106	Cimarron:Woodward Composite	75	I	-	65	2	1	0	30	30	1	1
4259	Clinton "59" (check)	40	S	4	40	0	3	0	-	-	T	T
839	Kanota (check)	75	S	4	30	75	5	0	30	20	1	1
3991	Osage (check)	50	S	2	3	15	0	0	20	30	1	1
4988	Mb. O-205: Columbia x (Victoria-Richland)	75	S	4	16	0	1	0	20	30	1	1
5323	" : "	75	S	4	16	0	5	5	20	30	2	2
6625	Columbia x Marion	50	I	4	8	1	0	0	20	40	1	1
6761	(Columbia x Victoria-Richland) x Clinton	80	S	4	18	0	10	0	30	30	1	1
6627	(Victoria-Richland x Columbia) x(Columbia-Bond)	75	S	-	4	0	8	0	20	30	1	1
6925	(Columbia x Victoria-Richland) x Mindo	50	I	-	30	0	T	0	20	40	1	1
6926	(Columbia x Marion) x Mindo	50	S	-	27	3	0	0	30	30	1	1
2820	Columbia (check)	50	I	4	40	5	30	5	30	50	1	1
6649	Santa Fe x Bonham	2	R	-	1	35	8	0	40	50	2	2
6644	Clinton2 x Ark. 674	80	S	0	8	0	3	-	20	30	T	T
6927	Clinton x Boone-Cartier	65	I	-	27	0	T	0	30	30	T	T

1/ New number series.
2/ Heads per 15 foot row at Ames: Row length not stated on Kansas data.
3/ Percent of surface affected.

Table 44 . Reactions to diseases on stations reporting of varieties and hybrid selections included in the Uniform Spring Sown Red Oat Nursery grown in 1954.

C. I. No.	Variety or Selection	Stem Rust														
		Abes.			Iowa			Lafayette			Columbia,		Per cent			
		Field	Races		Type	7A	8	Race	Field	Ind.	Races	Mo.				
			6	7							7A			7	8	7
		o/o						Type	Type	Reac.						
6620	Andrew x Landhafer	1	4	4	4	4	4	4	1-3	2	R	30	70	10	30	0
6621	"	1	4	Het	4	4	4	4	1-3	5	I	35	80	10	30	0
6631	"	5	4	1	1	4	4	4	1-3	15	S	T	100	10	30	0
6632	"	5	4	2	2	4	4	4	1-	20	I	T	100	25	30	0
4170	Andrew (check)	1	4	1	1	4	4	4	1-	5	R	5	90	5	30	1
6639	Andrew x Landhafer	5	4	2	2	4	4	4	1-	T	HR	T	100	5	30	0
6701	Clintonland	40	4	4	4	4	2	4	3	20	S	30	30	35	40	5
5924	Seminole:Appler x(Clinton2 -Santa Fe)	40	-	-	-	-	-	-	4	20	S	10	80	40	50	0
6600	Sunland:Fulghum 708 x Landhafer	40	-	-	-	-	-	-	4	10	S	30	90	40	50	0
4301	Nemaha	5	4	4	4	4	2	4	3-	15	I	25	15	20	30	4
5444	Cherokee Reselection	5	4	4	4	4	2	4	3	25	S	25	40	20	30	2
6730	(Lee-Victoria x Fulwin-Colo) x C. I. 5393	60	-	-	-	-	-	-	3	20	S	20	80	20	30	0
4672	(Bond-Anthony) x (Richland-Fulghum)	30	4	4	4	4	-	-	3	15	S	10	40	20	20	3
5106	Cimarron:Woodward Composite	80	-	-	-	-	-	-	3	35	CS	35	90	25	30	97
4259	Clinton "59" (check)	50	4	4	4	4	2	4	3	30	S	15	30	30	30	0
839	Kanota (check)	31	4	4	4	4	4	4	3	20	S	30	100	30	20	5
3991	Osage (check)	1	4	1	1	1	4	4	1-	1	R	T	100	T	10	5
4988	Mo. O-205: Columbia x (Victoria-Richland)	5	4	1	1	1	4	4	1-	T	HR	T	100	10	5	0
5323	" : "	5	4	1	1	1	4	4	1-	2	R	T	90	10	5	0
6625	Columbia x Marion	10	4	1	1	1	4	4	1-	2	R	T	70	5	5	0
6761	(Columbia x Victoria-Richland) x Clinton	40	4	4	4	4	3	4	3	20	S	25	80	35	10	0
6627	(Victoria-Richland x Columbia) x (Columbia-Bond)	5	-	-	-	-	-	-	1-	T	HR	5	90	T	5	0
6925	(Columbia x Victoria-Richland) x Mindo	20	-	-	-	-	-	-	1	T	HR	5	40	20	5	0
6926	(Columbia x Marion) x Mindo	30	-	-	-	-	-	-	2+	2	R	10	70	15	5	0
2820	Columbia (check)	50	4	4	4	4	4	4	3	20	S	40	90	40	10	11
6649	Santa Fe x Bonham	40	-	4	-	-	-	-	3	2	R	10	15	15	15	0
6644	Clinton2 x Ark. 674	10	4	4	-	-	-	-	2+	10	I	20	30	20	5	2
6927	Clinton x Boone-Cartier	40	-	-	-	-	-	-	3-	15	I	40	30	30	10	0

1/ Greenhouse readings: Type of infection.

SOUTHERN REGION

In 1954 winter conditions in the region were generally favorable. As survivals were good, yields obtained from fall-sown oats averaged high at most points. Although rust was present in many areas, it was not especially destructive; and even rust-susceptible entries produced annual yields well above average in many cases.

For the past several years winters have been so mild that certain oats that lack much hardiness have survived better than they would normally be expected to survive, and as a result, such varieties have in several cases produced yields that were superior to what may reasonably be expected over a longer period. This has been unfortunate in that culture of oats almost entirely lacking in hardiness may be extended beyond the limits of their adaptation, and farmers may as a result lose a crop by seeding oats that cannot withstand winters in the areas where sown.

Although rust was no considerable factor in yields in 1954, these diseases were present and damaging at some points. Although stem rust was severe at many locations in 1953, it did very little damage in 1954, especially in the South.

As in the past several years, three regional fall-sown yield nurseries were grown in 1954. These were as follows: (1) Uniform Special Winter Oat Nursery, (2) Uniform Fall Sown Oat Nursery, and (3) Uniform Florida-Gulf Coast Oat Nursery. The general location of the stations on which each nursery is grown has previously been outlined (1953 report) and need not be repeated here. The results from each of the three nurseries will be discussed separately.

Uniform Special Winter Oat Experiment

This nursery has now been grown for seven years and has been expanded from seven stations in 1948 to some 25 in 1954. This has resulted in this nursery's now being grown more widely than any other nursery included in the National Cooperative Oat Breeding Program. The reason for this expansion has resulted from a tremendously increased, almost nationwide, interest in winter oats. This has been prompted by the production of hardier varieties than were previously available and also by the fact that for several years winters have been comparatively mild. As a result, winter oats are definitely pushing northward in the United States. This is only natural because where winter oats will survive with stands of 50 percent or better they often outyield the spring-seeded crop by as much as 50 to 75 percent, and the quality of grain produced is superior as indicated by the bushel weights which often exceed those of spring oats from 20 to 30 percent.

With the increase in interest in the breeding of hardier oats having good agronomic characters, it seems probable that we may well expect winter oats to become important much farther north than was even thought possible a quarter century ago.

Stations growing this nursery in 1954 include the following:

Ark.	Fayetteville	Mo.	Pierce City
Del.	Newark		Sikeston
Ill.	Carbondale	Ohio	Columbus
	Urbana	Okla.	Stillwater
Ind.	Lafayette	Oreg.	Corvallis
	Princeton	Penna.	Landisville
Kans.	Hutchinson		State College
	Mound Valley	R. I.	Kingston
Ky.	Lexington	Tex.	Chillicothe
Md.	Beltsville	Va.	Blacksburg
Mass.	Feeding Hills	Wash.	Vancouver
			Mt. Vernon

In addition, this nursery was grown from spring seeding at Aberdeen, Idaho, for observation and seed increase purposes; at Statesville, N. C., and Experiment, Ga., in Virus nurseries; and at Gainesville, Fla., in the rust disease garden.

Data on the Special Winter Oat Nursery are included in tables 45 to 56, inclusive.

Yield, Bushels Per Acre

Data on yields per acre were received from 16 stations in 1954; but as yields were reported on only part of the entries at Princeton, Indiana, data from that point are omitted in calculating averages which are therefore for only 15 stations.

All entries averaged in excess of 50 bushels per acre, and eight entries averaged more than 60 or more bushels per acre. The highest yielders were C. I. 6717 - a sister strain to Mustang - and the early Wintok selection, which averaged 63.5 and 63.0, respectively. The poorest yielders were C. I. 6904 and Cimarron. Both averaged 52.9 bushels or some ten bushels below the top yielders. The two top yielders are of special interest as they are both new entries.

Yields on the different stations differed greatly. The highest yields were reported from Princeton, Ind., where, unfortunately, data were not recorded on all entries and thus data from that point could not be included in over-all averages. High yields were also recorded for certain entries at Beltsville and at Blacksburg. In each of these nurseries a number of entries exceeded 100 bushels per acre. The lowest yields were recorded at Hutchinson, Kans., Amarillo, Texas, and Fayetteville, Ark. The comparatively good yields obtained at Kingston, R. I. and Feeding Hills, Mass. - points far to the north of where fall-seeded oats were previously even considered as a crop - are of unusual interest. Yields at both points were about as high as those usually expected from spring-seeded oats in the lower New England area. The five-station year average yields of the two very hardy varieties Wintok and Forkeddeer on the three stations, Feeding Hills, Mass., Kingston, R. I., and Ellington, Conn., in 1953 and 1954 are 77.7 and 69.4 bushels per acre, respectively. Such yields certainly are high enough to warrant serious consideration of fall-sown oats in that area. All three stations are well above the 30° and close to the 25° December-February isotherm; consequently, results from future experiments will be awaited with genuine interest.

Winter Survival

Survival data of a differential nature were obtained from 11 stations in 1954. On all other stations reporting on survival, all entries survived 100 percent. As the result of an oversight survival data from Stillwater were omitted from the average. This is indicated in a footnote in Table 48. Only two entries had reduced stands at Stillwater: LeConte, 97, and Lemont Cross, 89 percent, respectively. The inclusion of the Stillwater data would have changed over-all averages, but it would not have altered the ranking of the entries on the basis of hardiness, as Lemont Cross was the least hardy and LeConte was one of the three entries most lacking in hardiness in 1953-54.

The most hardy entry was the Early Wintok Selection with Dubois and Wintok ranking second and third in hardiness. The exceptionally high average survival of the Early Wintok Strain and of Dubois are of exceptional interest since Dubois, especially, has exceptionally good agronomic characters such as stiff straw, high yield, and good test weight - characters which until Dubois appeared were lacking in any really hardy oat.

Test Weight

Data on test weight were received from 12 stations in 1954. As data from Princeton, Ind., were incomplete, averages are for 11 stations only.

As usual, test weights were high, and only a few entries on a few stations tested below 32 pounds per bushel. The poorest test weights were recorded at Beltsville, Md., whereas the highest quality grown were harvested at Lexington, Ky. On the average, entries testing highest were C. I. 6728, LeConte, Forkeddeer, Lee Check, and Dubois. All tested 36 pounds or above. The poorest testing entries were C. I. Nos. 6904 and 6901 - which averaged 33.1 and 33.3 pounds per bushel - and Mustang, which averaged 33.7 pounds.

Plant Height

Data on plant height were received from 16 points. Oats grew tallest at Mt. Vernon, Wash., and Blacksburg, Va. At Mt. Vernon some entries exceeded five feet tall. Oats were shortest at Stillwater, Okla. and Amarillo, Tex. At both points some entries grew less than two feet tall.

On the average, the tallest entries were Arkwin and Lemont Cross. Both exceeded 38 inches tall. The shortest entry was Cimarron, which averaged 32.4 inches tall.

Standing Ability

In 1954 reports on standing ability were received from 12 stations. Among these oats lodging was most severe at Landisville, Penna., Lexington, Ky., and Mt. Vernon, Wash., and least at Blacksburg, Va., and Hutchinson, Kans. The weakest strawed entry as indicated by average data was the Early Wintok Selection, which lodged 54.7 percent. This was unfortunate because except for straw strength this oat appeared of exceptional interest in 1954. The least amount of lodging was recorded in LeConte and Arkwin. Dubois was neither the stiffest strawed nor the weakest strawed entry in 1954; but it could be referred to as "above average", a fact that is of special interest in connection with this new and promising variety which in 1953 also lodged less than most entries.

Date Headed

Heading dates were reported by 13 stations in 1954. Oats headed earliest at Fayetteville, Ark., Mound Valley, Kans., and Stillwater, Okla., and latest at Feeding Hills, Mass.

On the average, all entries headed in May. The earliest entries were Cimarron and Early Wintok Selection, which headed May 7 and May 9, respectively; whereas the latest entries were C. I. Nos. 6904, 6727, and 6903, which headed May 20, May 19, and May 19, respectively.

Date Ripe

Data on date ripe were received from seven stations. Cimarron and Early Wintok, which headed first, also ripened first on May 17 and May 18, respectively. The last entry to ripen was C. I. 6727, which on the average ripened May 26 - almost ten days later than Cimarron. Dubois ripened May 19 or three days earlier than Lee Check.

Forage Value and Type of Growth

Reports on forage growth in this experiment have not been sufficiently complete for a very accurate evaluation of entries included. Only four reports on fall growth and five on spring growth were received in 1954. In the fall of 1953 the soil was so dry the entries on many stations did not come up until the onset of winter. This does not explain the absence of spring forage percentages, however. As averages are for so few stations, they are inconclusive either as to the fall or spring growth. In the fall, Arkwin averaged highest and C. I. 6571, the lowest. The ratings for these two oats were 106.0 and 91.5 percent - a spread of 14.5 percent. In the spring the highest percentage was 113.6 percent for Early Wintok and the lowest, 82.0 percent for LeConte, the spread being 31.6 percent between the highest and lowest ratings.

Type of growth was reported from four stations. The most decumbent growing entry was Wintok and the least decumbent, Arkwin. Data were too meagre for indications to merit serious consideration.

Disease Resistance

Data on the disease reaction on different entries in the Uniform Special Winter Oat Experiment were received from six stations. No data on stem rust are available; crown rust data received from Princeton, Indiana indicates that except for C. I. Nos. 6904, Mustang, 6571, 6717, 6901, and 6718, all entries in these experiments were susceptible. Arkwin and C. I. No. 6903 were indicated as having an intermediate type reaction. Apparently the race present at Princeton was not identified. Data on smut infection obtained from Feeding Hills, Massachusetts indicated that Wintok and Forkeddeer had more smutted heads than other entries.

Data on septoria were received from Urbana, Ill. The lightest type of infection was recorded for LeConte, Arkwin, and Dubois; whereas C. I. 6571 and C. I. 6717 - sister strains to Mustang - were given the highest readings.

Data on reaction to mosaic, or virus, were received from Statesville, N. C., and Experiment, Ga. The data from the two stations differ. At Statesville Arkwin, Lee (check), C. I. 6571, and Lemont Cross had the lightest infections - a Trace in each case. At Experiment Arkwin and Lemont Cross were not outstandingly resistant, but C. I. 6571 gave a resistant type of reaction there also. No data on Lee were received from Experiment. Several entries especially susceptible at one point were not unusually susceptible at the other; C. I. 6904 is an example. C. I. 5368 appeared to be the most susceptible entry at both points.

Data on Red Leaf recorded at Beltsville on some of the entries indicate a differing reaction. Lemont Cross was not affected; whereas several of the entries were given a Type 3, indicating considerable Red Leaf was present.

An observation made at Beltsville by the senior compiler is that in a surprising number of cases oats found highly susceptible to mosaic in N. C. and Georgia were badly affected by red leaf at Beltsville in 1954. Just what, if anything, this indicates is not known; but the fact remains. An investigation as to why this was true seemingly would merit scientific investigation.

Table 45 . Entries included in the Uniform Special Winter Oat Experiment grown in 1953-54.

C. I. No.	Variety or Hybrid	Selection	Seed Source 1/
2042	Lee (check)	Winter Turf x Aurora	Check
3170	Forkedeer	Tenn. 092	Tenn.
3424	Wintok	Okla. 1-32-1446	Okla.
4600	Coy	Lee-Victoria x Fulwin Resel. 5346 of C.I. 4316	U.S.D.A.
4680	Mustang	Tex. Resel. 3770-9	Tex.
5106	Cimarron: Woodward Composite	Okla. 472606	Okla.
5107	LeConte	Tenn. 138-14-427-1	Tenn.
5368	Clinton x Hairy Culberson	Purdue 407-25-6	Ind.
5849	Early Wintok Selection	Okla. 492825	Okla.
5850	Arkwin	Ark. R. 19-53-4-3	Ark.
6571	(Lee-Victoria) x Fulwin	Tex. 3770-7	Tex.
6572	Dubois	Purdue 4011-4-92	Ind.
6717	(Lee-Victoria) x Fulwin	Tex. 3770-1	Ky.
6718	Lemont Cross	Md. 2841-2	USDA
6727	Clinton x Forkedeer	Purdue 4011-14-4-3	Ind.
6728	"	Purdue 4011-5-3-1-3	Ind.
6901	(Lee-Victoria) x Fulwin	Tex. 3770-27	Ky.
6903	Lee-Victoria x Forkedeer	Purdue 392A2-13-1-2-1	Ind.
6904	"	Purdue 392A2-28-5	Ind.

1/ The U. S. D. A. and in certain cases additional states cooperated in the production of many of these oats.

Table 46 . Summary of data obtained on the Uniform Special Winter Oat Experiment grown in 1953-54.

Yield Rank	C.I. No.	Variety or Selection	Acro Yield (15 Sta) Bu.	Survival (10 Sta) o/o	Test Wt. (11 Sta) Lbs.	Plant Ht. (16 Sta) Ins.	Lodg- ing (12 Sta) o/o	Forage Rating ^{1/} Fall (4 Sta) o/o	Spring (5 Sta) o/o	Date Head Ripe (13 Sta)	Date Ripe (7 Sta)	Type Growth (4 Sta)
1	6717	(Lee-Victoria) x Fulwin	63.5	68.6	35.1	36.6	42.5	95.0	90.6	5/17	6/23	D-I
2	5849	Early Wintok Sel.	63.0	81.0	35.1	35.1	54.7	99.3	113.6	9	18	D
3	6572	Dubois	62.9	77.4	36.0	34.1	35.0	101.3	100.8	14	19	D
4	3424	Wintok	61.6	75.8	35.7	35.5	48.8	96.9	108.0	13	19	D-I
5	6571	(Lee-Victoria) x Fulwin	60.9	65.9	34.9	37.6	39.1	91.5	83.2	16	23	D-I
6	5368	Clinton & Hairy Culberson	60.7	71.5	35.3	37.2	31.9	100.3	100.4	12	19	D-I
7	6727	Clinton x Forkeddeer	60.0	66.5	34.4	36.3	32.3	94.8	96.8	19	26	D
8	2042	Lee (check)	60.0	61.3	36.2	37.9	39.5	100.0	100.0	16	22	D-I
9	5107	LeConte	59.7	58.6	36.9	36.5	18.8	100.0	82.0	16	23	D-I
10	4600	Coy	57.5	65.4	34.1	37.8	28.1	103.5	91.2	11	23	D-I
11	6728	Clinton x Forkeddeer	57.4	70.2	37.1	34.2	39.6	94.8	104.4	14	18	D
12	6718	Lemont Cross	57.4	51.3	35.8	38.1	25.2	104.8	71.6	14	21	D-I
13	6903	Lee-Victoria x Forkeddeer	57.3	67.5	35.8	34.3	27.7	100.5	93.6	19	22	D-I
14	3170	Forkeddeer	56.9	69.2	36.4	36.9	49.9	98.8	98.8	15	20	D-I
15	6901	(Lee-Victoria) x Fulwin	56.5	63.8	33.3	35.0	46.5	103.3	85.8	14	21	D-I
16	4660	Mustang	55.5	60.3	33.7	36.4	39.0	97.0	84.2	14	21	D-I
17	5850	Arkwin	53.7	59.0	34.5	38.2	19.5	106.0	101.6	14	23	I-U
18	5106	Cimarron	52.9	71.6	34.4	32.4	42.1	100.8	111.8	7	17	D-I
19	6904	Lee-Victoria x Forkeddeer	52.9	51.2	33.1	35.9	28.5	98.0	82.4	20	23	D-I

^{1/} Based on Appler = 100 o/o

Table 47 . Yields on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment

grown in 1953-54.

C. I. Variety or No.	Average 15 Stations	Fayetteville, Ark.	Newark, Del.	Carbondale, Ill.	Princeton, Ind. 1/	Hutchinson, Kans.	Lexington, Ky.	Beltzville, Md.	Feeding Hills, Mass.	Pierce City, Mo.	Stillwater, Okla.	Lendsville, Pa.	State College, Pa.	Kingston, R. I.	Amarillo, Tex.	Blacksburg, Va.	Mt. Vernon, Wash.
Bushels																	
5107 LeConte	59.7	39.6	55.4	103.8	115.7	8.4	51.1	82.7	55.8	39.0	31.4	101.9	57.1	79.2	29.5	99.8	61.3
5850 Arkwin	53.7	36.9	48.9	68.4	137.9	5.4	70.3	106.2	29.1	31.8	31.2	97.4	56.7	41.6	20.0	104.7	57.3
3424 Wintok	61.6	35.0	56.5	72.0	-	30.0	46.1	102.0	61.2	57.2	43.2	70.9	57.0	129.6	36.3	89.3	37.6
5106 Cimarron: Woodward Composite	52.9	19.2	61.7	71.1	117.2	22.8	59.1	62.4	59.2	47.6	40.7	76.2	62.1	46.9	46.0	65.4	53.0
5849 Early Wintok Selection	63.0	22.9	69.7	105.2	-	24.0	38.1	118.4	84.6	51.9	41.1	60.4	69.8	80.4	2/	100.1	53.6
3170 Forkedeer	56.9	43.1	55.0	57.0	110.5	18.4	35.2	99.3	58.3	51.2	41.1	75.9	59.4	85.8	25.8	86.1	62.0
6572 Dubois	62.9	27.4	57.5	100.7	117.4	24.4	69.2	97.2	81.6	47.6	49.4	89.9	53.1	70.5	29.5	78.9	66.6
6727 Clinton x Forkedeer	60.0	37.8	55.8	82.6	110.1	12.1	55.2	114.4	69.1	53.5	50.6	84.9	51.9	64.4	15.6	95.9	56.6
" "	57.4	32.0	54.2	80.5	117.9	20.4	58.0	108.7	62.9	48.5	47.8	81.4	52.5	73.3	25.5	52.6	62.6
2042 Lee (check)	60.0	29.9	54.8	82.8	-	13.8	57.8	110.8	53.5	51.8	43.4	82.6	51.8	81.7	22.4	85.4	77.6
6903 Lee-Victoria x Forkedeer ²	57.3	26.4	52.6	96.3	112.2	18.0	51.9	79.5	62.2	52.7	45.9	84.9	64.0	40.1	20.1	100.6	64.0
6904 " "	52.9	46.2	49.9	60.2	99.2	18.5	66.2	101.9	21.6	48.2	44.1	81.6	55.8	33.4	7.4	85.9	73.0
4800 Coy: Lee-Victoria x Fulwin	57.5	33.8	62.9	91.7	128.7	18.9	81.2	79.2	40.4	44.6	35.7	67.6	55.3	80.1	22.2	75.5	73.6
4660 Mustang	55.5	37.8	49.7	58.7	88.1	22.0	74.8	75.5	52.5	53.4	45.6	87.4	59.3	60.9	22.8	56.3	76.0
6571 (Lee-Victoria)x Fulwin	60.9	24.6	56.4	103.3	-	20.7	82.9	71.4	66.4	49.5	53.3	86.7	58.0	65.7	13.9	93.2	67.0
6717 " "	63.5	37.3	62.5	99.6	-	20.0	74.6	103.4	55.0	47.6	56.7	87.6	51.1	73.8	10.5	101.9	70.3
6901 " "	56.5	30.1	55.3	84.0	-	19.5	61.1	90.9	54.8	50.0	52.2	61.7	62.7	61.9	12.5	98.1	53.3
6718 Lemont Cross	57.4	30.0	59.3	94.3	132.3	5.7	66.8	88.0	58.7	39.4	38.0	82.0	34.8	63.6	25.7	100.1	74.0
5368 Clinton x Hairy Culberson	60.7	28.2	58.6	103.9	102.8	11.3	49.4	118.4	64.7	45.6	46.4	78.7	63.0	76.0	36.1	73.2	57.0

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1/ Data incomplete, so not included in average.

2/ Average of station (23.4) substituted for missing data.

Table 48 . Survival on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment grown in 1953-54. 1/

C. I. No.	Variety or Selection	Average 10 Stations	Feeding Hills, Mass.	State College, Pa.	Beltsville, Md.	Lafayette, Ind.	Urbana, Ill.	Columbia, Mo.	Fayetteville, Ark.	Hutchinson, Kans.	Mound Valley, Kans.	Amariillo, Tex.
							Percent					
5107	LeConte	58.6	45	56	100.0	45	4.0	10	100	49	97	80
5850	Arkwin	59.0	20	71	100.0	25	22.5	5	100	46	100	100
3424	Wintok	75.8	54	91	100.0	70	25.0	35	100	83	100	100
5106	Cimarron; Woodward Composite	71.6	51	76	100.0	55	17.5	45	100	71	100	100
5849	Early Wintok Selection	81.0	82	86	96.3	75	32.5	55	100	85	100	2/
3170	Forkedeer	69.2	45	70	84.9	60	11.3	55	100	66	100	100
6572	Dubois	77.4	87	79	85.5	85	11.3	55	100	71	100	100
6727	Clinton x Forkedeer	66.5	51	49	85.6	75	6.8	43	100	65	100	90
6728	"	70.2	50	69	91.0	60	18.7	48	100	65	100	100
2042	Lee (check)	61.3	42	59	93.1	50	6.3	8	95	63	97	100
6903	Lee-Victoria x Forkedeer ²	67.5	46	70	71.9	85	8.7	28	100	65	100	100
6904	"	51.2	12	37	46.6	25	1.0	28	100	63	99	100
4600	Coy; Lee-Victoria x Fulwin	65.4	44	65	62.8	60	11.5	38	100	74	99	100
4660	Mustang	60.3	41	70	45.2	40	11.3	33	100	63	99	100
6571	(Lee-Victoria) x Fulwin	65.9	45	72	62.9	80	5.5	25	100	69	100	100
6717	"	68.6	47	70	81.8	75	27.5	25	100	60	100	100
6901	"	63.8	41	65	44.1	75	22.5	28	100	63	99	100
6718	Lemont Cross	51.3	45	22	46.4	55	4.5	15	100	38	87	100
5358	Clinton x Hairy Culberson	71.5	57	89	81.7	65	30.0	18	100	74	100	100

1/ 100 o/o survival at Newark, Del., and Mt. Vernon, Wash.; all varieties survived 100 o/o at Stillwater, Okla., except LeConte and Lemont, 97 and 89, respectively. Stillwater omitted from average through oversight.

2/ Average of station (98.3) substituted for missing data.

Table 49. Type of growth on stations reporting of varieties and selections in the Uniform Special Winter Oat Experiment in 1953-54.

Average 4 Stations	Feeding Hills, Mass.	Beltsville, Md.	Fayetteville, Ark.	Stillwater, Okla.	D	Summary
D-I	I-U	D	D	D-I	2	2
I-U	I-U	I	U	U	0	2
D-I	I-U	D	D	D	3	1
D-I	I-U	D	D	D-I	2	2
D	D-I	D	D	D-I	2	2
D-I	I	D	D	D-I	2	2
D	D-I	D	D	D-I	2	2
D	D-I	D	D	D-I	2	2
D-I	I-U	D	D	D-I	2	2
D-I	I	D	D	D-I	2	2
D-I	I	D	D	D-I	2	2
D-I	I-U	D	D	D-I	2	2
D-I	I	I	D	D-I	2	2
D-I	I-U	D	D	D-I	2	2
D-I	I	I	D	D-I	1	3
D-I	I	D	D	D-I	2	2
D-I	I	D	D	D-I	2	2
D-I	I-U	D	D	D-I	2	2
D-I	I	D	D	D-I	2	2
D-I	I	D	D	D-I	2	2
D-I	I	D	D	D-I	2	2

Table 50. Test weights on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat

Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average 11 Stations	Kinston, R. I.	Feeding Hills, Mass.	Newark, Del.	State College, Pa.	Landsville, Pa.	Beltville, Md.	Blacksburg, Va.	Lexington, Ky.	Princeton, Ind. 1/	Pierce City, Mo.	Hutchinson, Kans.	Stillwater, Okla.
Pounds														
5107	LeConte	36.9	35.0	36.0	36.7	36.9	36.7	34.5	35.7	39.6	40.6	40.0	39.0	35.5
5850	Arkwin	34.5	35.0	32.2	34.2	34.6	35.5	30.5	34.5	38.4	39.9	34.5	37.8	32.0
3424	Wintok	35.7	32.0	36.5	37.4	36.6	33.6	34.5	34.8	38.1	-	38.5	36.5	34.4
5106	Cimarron: Woodward Composite	34.4	34.0	33.5	35.4	35.5	33.0	32.0	29.5	36.0	36.8	37.0	36.8	36.0
5849	Early Wintok Selection	35.1	34.0	34.3	36.3	37.4	30.7	34.0	33.0	37.2	-	38.0	37.3	33.9
3170	Forkeddeer	36.4	35.0	35.0	35.7	36.0	34.5	32.5	38.0	38.6	39.5	38.5	37.3	39.0
6572	Dubois	36.0	34.0	32.5	36.9	35.6	34.2	33.0	36.6	40.6	39.6	38.0	38.5	35.2
6727	Clinton x Forkeddeer	34.4	32.0	31.5	35.1	34.2	36.5	22.5	34.8	35.7	34.9	36.5	34.5	35.0
6728	"	37.1	36.0	33.5	37.3	27.0	38.0	33.0	35.7	40.6	40.8	40.5	38.8	38.0
2042	Lee (check)	36.2	37.0	36.7	36.6	35.9	36.4	33.5	36.8	38.5	-	38.5	33.8	34.5
6903	Lee-Victoria x Forkeddeer ²	35.8	35.0	34.0	35.7	37.7	38.0	31.0	34.4	38.5	37.9	39.5	35.0	35.2
6904	"	33.1	35.0	30.0	34.9	35.2	35.3	25.5	33.9	34.7	33.6	37.0	31.8	31.2
4600	Coy: Lee-Victoria x Fulwin	34.1	33.0	35.0	35.1	35.3	33.5	30.5	31.4	36.8	38.8	36.5	35.8	32.0
4660	Mustang	33.7	34.0	32.3	33.2	34.9	34.2	27.0	32.5	36.2	37.5	39.0	33.8	33.7
6571	(Lee-Victoria) x Fulwin	34.9	36.0	34.7	34.5	35.4	34.2	28.5	34.3	38.3	-	38.0	33.5	36.8
6717	"	35.1	35.0	37.7	35.9	36.3	34.8	28.0	30.0	37.5	-	37.5	34.5	34.2
6901	"	33.3	35.0	36.5	34.0	35.2	31.4	24.0	34.8	37.6	-	35.5	34.6	32.0
6718	Lemont Cross	35.8	35.0	38.0	37.1	35.2	37.3	29.0	33.5	41.1	40.5	38.5	36.8	32.5
5368	Clinton x Hairy Culberson	35.3	35.0	33.2	35.8	36.6	33.7	30.5	32.2	39.6	38.5	38.0	37.8	35.9

1/ Data incomplete, so not included in average.

Table 51. Plant heights on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average 16 Stations	Kingsston, R. I.	Feeding Hills, Mass.	Newark, Del.	State College, Pa.	Beltsville, Md.	Blacksburg, Va.	Lexington, Ky.	Urbana, Ill.	Carbondale, Ill.	Pierce City, Mo.	Sikeston, Mo.	Hutchinson, Kans.	Mound Valley, Kans.	Stillwater, Okla.	Amertillo, Tex.	Mt. Vernon, Wash.
Inches																		
5107	LeConte	36.5	39.0	35.0	40.5	34.0	41.0	48.7	36.0	33.0	30.0	30.0	50.0	25.0	39.0	22.0	23.0	58.0
5850	Arkwin	38.2	32.0	39.0	44.5	34.0	46.0	50.0	40.0	38.0	31.0	32.2	50.0	26.0	41.0	23.0	21.0	63.0
3424	Wintok	35.5	40.0	39.0	35.5	32.0	41.5	45.7	35.0	35.0	28.0	32.8	46.0	24.0	36.0	19.0	22.0	56.0
5106	Cimarron; Woodward Composite	32.4	36.0	35.0	40.0	27.0	36.0	40.5	34.0	34.0	24.0	25.4	40.0	19.0	31.0	17.0	22.0	57.0
5849	Early Wintok Selection	35.1	35.0	37.0	38.0	30.0	39.8	45.2	37.0	38.0	28.0	30.8	44.0	23.0	35.0	15.0	17.0	64.0
3170	Forkedeer	36.9	33.0	38.0	34.0	32.0	44.5	50.2	38.0	36.0	30.0	35.4	50.0	26.0	39.0	22.0	23.0	60.0
6572	Dubois	34.1	38.0	35.0	33.0	30.0	42.5	46.0	35.0	32.0	26.0	28.6	45.0	25.0	34.0	16.0	19.0	61.0
6727	Clinton x Forkedeer	36.3	38.0	39.0	32.0	33.0	41.8	46.5	39.0	33.0	29.0	34.0	47.0	25.0	41.0	23.0	20.0	59.0
6728	"	34.2	42.0	35.0	32.0	31.0	40.0	43.2	38.0	35.0	28.0	27.8	44.0	24.0	35.0	16.0	22.0	54.0
2042	Lee (check)	37.9	40.0	39.0	34.5	34.0	43.3	47.5	41.0	39.0	29.0	33.6	49.0	27.0	40.0	22.0	24.0	63.0
6903	Lee-Victoria x Forkedeer ²	34.3	32.0	38.0	33.5	33.0	37.5	46.5	36.0	33.0	29.0	32.0	34.0	26.0	40.0	22.0	20.0	57.0
6904	"	35.9	45.0	35.0	36.0	32.0	35.8	44.5	32.0	33.0	28.0	39.8	46.0	27.0	38.0	22.0	22.0	58.0
4600	Coy Lee-Victoria x Fulwin	37.8	42.0	42.0	36.5	36.0	41.5	47.7	39.0	36.0	30.0	34.8	52.0	29.0	41.0	21.0	20.0	57.0
4660	Mustang	36.4	40.0	36.0	39.5	33.0	39.8	47.5	37.0	34.0	26.0	34.8	50.0	25.0	36.0	18.0	23.0	63.0
6571	(Lee-Victoria) x Fulwin	37.6	32.0	40.0	37.5	34.0	38.0	49.2	39.0	39.0	30.0	34.8	47.0	27.0	41.0	24.0	25.0	64.0
6717	"	36.6	35.0	41.0	35.5	32.0	40.5	50.2	35.0	33.0	30.0	34.2	46.0	28.0	41.0	24.0	28.0	52.0
6901	"	35.0	27.0	39.0	39.0	30.0	35.0	48.7	35.0	33.0	29.0	32.6	45.0	27.0	39.0	21.0	20.0	60.0
6718	Lemont Cross	38.1	36.0	42.0	34.5	35.0	42.5	53.0	40.0	37.0	31.0	33.0	49.0	28.0	42.0	26.0	23.0	58.0
5368	Clinton x Hairy Culberson	37.2	43.0	41.0	33.5	32.0	44.0	47.2	36.0	38.0	31.0	32.2	50.0	26.0	39.0	16.0	22.0	64.0

1/ Average of station (22.2) substituted for missing data.

Table 52 . Percent of lodging on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat

Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average 12 Stations	Pa. College,	Pa. Landsville,	Mo. Beltsville,	Blackburg, Va.	Lexington, Ky.	Princeton, Ind.	St. Joseph, Mo.	Fayetteville, Ark.	Hutchinson, Kans.	Mound Valley, Kans.	Stillwater, Okla.	Mt. Vernon, Wash.
Percent														
5107	LeConte	18.8	20	35	5.0	0	47	25	2	0	0	23	18	50
5850	Arkwin	19.5	21	56	5.0	0	17	15	18	0	0	22	20	60
3424	Wintok	48.8	62	98	55.0	3.7	80	46	36	80	3	1 1/2	39	40
5106	Cimarron: Woodward Composite	42.1	2	59	50.0	2.5	100	20	21	80	2	1 1/2	28	50
5849	Early Wintok Selection	54.7	2	78	50.0	18.7	100	40	46	100	20	1 1/2	51	60
3170	Forkeddeer	49.9	82	98	50.0	6.2	93	60	31	10	0	55	53	60
6572	Dubois	35.0	48	99	50.0	1.2	63	40	21	0	1	24	34	40
6727	Clinton x Forkeddeer ^m	32.3	22	50	45.0	1.2	90	40	8	20	0	26	25	60
6728	Lee (check)	39.6	62	66	40.0	0	100	40	13	50	0	25	29	50
2042	Lee-Victoria x Forkeddeer ²	39.5	49	94	25.0	0	92	60	19	10	0	35	50	40
6903	Lee-Victoria x Forkeddeer ^m	27.7	2	61	10.0	0	58	15	15	10	0	35	18	60
6904	Coy: Lee-Victoria x Fulwin	28.5	2	36	5.0	1.2	57	32	9	20	0	53	29	50
4600	Mustang	28.1	45	91	10.0	3.7	53	30	30	0	0	33	13	50
6571	(Lee-Victoria) x Fulwin ^m	39.0	41	85	10.0	0	67	3	9	80	1	48	8	60
6717	Lemont Cross ^m	39.1	69	30	20.0	3.7	40	70	8	100	0	40	29	60
6901	Clinton x Hairy Culberson	42.5	70	71	15.0	1.2	63	60	12	100	0	38	30	40
6718		46.5	2	78	20.0	11.7	80	60	20	100	8	50	20	60
5368		25.2	26	69	15.0	7.5	50	15	7	10	0	33	20	50
		31.9	86	78	25.0	1.2	38	25	13	10	0	15	31	60

1/ Average of station (42.7) substituted for missing data.
 2/ Average of station (50.2) substituted for missing data.
 3/ Average of station (39.1) substituted for missing data.

Table 53 . Date of heading on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat

Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average 13 Stations	Feeding Hills, Mass.	Newark, Del.	Beltville, Md.	Lexington, Ky.	Urbana, Ill.	Carbondale, Ill.	Pierce City, Mo.	Fayetteville, Ark.	Hutchinson, Kans.	Mound Valley, Kans.	Stillwater, Okla.	Amarillo, Tex.	Mt. Vernon, Wash.
5107	LeConte	5/16	6/7	5/27	5/25	5/18	6/1	5/6	5/1	4/23	5/11	4/28	4/28	5/17	6/6
5850	Arkwin	14	7	20	20	13	5/29	5	2	19	8	26	27	24	1
3424	Wintok	13	8	27	17	15	29	5	1	23	9	26	25	14	1
5106	Cimarron; Woodward Composite	7	2	22	12	4	29	4/26	4/28	15	2	22	18	3	5/29
5849	Early Wintok Selection	9	2	21	12	8	26	28	5/3	15	1	23	19	1/	28
3170	Forkedeer	15	8	23	22	17	6/1	5/6	5/3	24	9	25	27	24	6/3
6572	Dubois	14	7	27	22	16	1	2	1	21	10	26	23	15	5
6727	Clinton x Forkedeer	19	10	28	28	24	1	12	8	29	13	28	30	18	10
6728	"	14	8	28	22	17	1	5	4/29	21	11	26	23	16	6
2042	Lee (check)	16	7	26	24	17	5/31	6	5/7	25	13	27	29	18	1
6903	Lee-Victoria x Forkedeer ²	19	8	28	27	25	6/1	10	4	29	16	5/8	5/2	24	2
6904	"	20	14	28	6/1	26	1	13	5	27	15	7	4/30	20	3
4600	Coy:Lee-Victoria x Fulwin	11	2	21	5/24	11	5/31	4/30	4/29	19	6	4/25	24	15	5/26
4660	Mustang	14	6	23	25	16	6/1	5/5	5/1	21	9	24	25	19	30
6571	(Lee-Victoria) x Fulwin	16	10	12	27	23	1	6	3	25	15	28	29	22	6/2
6717	"	17	10	16	27	24	5/31	6	3	26	15	28	29	23	4
6901	"	14	6	28	23	16	6/1	1	4/29	20	9	25	25	19	4
6718	Lemont Cross	14	5	28	22	13	5/30	2	5/1	23	14	25	28	18	1
5368	Clinton x Hairy Culberson	12	5	13	22	16	30	3	4/29	22	9	25	20	13	2

1/ Average of station (5/18) substituted for missing data.

Table 54 . Date of ripening on stations reporting of varieties and hybrid selections included in the Uniform Special Winter

Oat Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average Stations	R. I. Kingston,	Feeding Hills, Mass.	Beltville, Md.	Carbondale, Ill.	Fayetteville, Ark.	Stillwater, Okla.	Mt. Vernon, Wash.
5107	LeConte	6/23	7/12	7/10	6/18	6/18	6/4	6/7	6/28
5850	Arkwin	23	20	12	15	15	4	5	27
3424	Wintok	19	12	8	15	11	4	5/25	27
5106	Cimarron: Woodward Composite	17	14	6	10	11	2	21	26
5849	Early Wintok Selection	18	14	5	13	12	4	21	27
3170	Forkedeer	20	12	8	18	11	4	29	29
6572	Dubois	19	12	6	18	11	4	21	7/2
6727	Clinton x Forkedeer	26	20	11	21	18	4	6/9	5
6728	"	18	12	6	17	12	4	5/21	6/24
2042	Lee (check)	22	12	11	18	17	4	6/4	25
6903	Lee-Victoria x Forkedeer ²	22	12	8	19	14	4	4	28
6904	"	23	14	14	21	15	4	5/29	7/6
4600	Coy:Lee-Victoria x Fulwin	23	20	9	20	12	4	6/3	6/28
4660	Mustang	21	14	12	20	11	4	5/29	29
6571	(Lee-Victoria) x Fulwin	23	14	10	21	14	4	6/3	7/3
6717	"	23	12	9	21	15	4	4	6/30
6901	"	21	12	7	22	11	4	5/28	7/2
6718	Lemont Cross	21	12	6	20	12	4	6/8	6/24
5368	Clinton x Hairy Culberson	19	12	6	18	10	4	5/21	29

Table 55 . Reaction to diseases on stations reporting of varieties and hybrid selections included in the Uniform Special Winter Oat Experiment grown in 1953-54.

C.I. No.	Variety or Selection	Feed- ing Bills, Mass.	Prin- ce- ton, Ind.	Urbana, Ill.	Statesville, N. C.		Experiment, Ga.		Beltsville, Md.	
					Virus o/o	Reac.	Virus I	Reac. o/o	Virus II	Reac. o/o
				Septorial/ Type						Red Leaf
5107	LeConte	0	S	1	10	M	0	0	0	3
5850	Arkwin	0	I	1	T	-	25	S	VS	1
3424	Wintok	1.2	S	4	30	S	10	S	S	1
5105	Woodward Composite: Cimarron	.1	S	2	40	S	10	S	S	-
5849	Early Wintok Selection	.9	S	4	40	S	10	L	S	-
5170	Forkeddeer	.9	S	3	5	S	10	L	S	-
6572	Dubois	0	S	1	80	S	10	S	S	-
6727	Clinton x Forkeddeer	0	S	4	100	S	50	S	S	-
5728	"	0	S	4	80	S	10	S	S	-
2042	Lee (check)	.2	S	4	T	-	10	L	-	2
6903	Lee-Victoria x Forkeddeer	.2	I	3	5	S	10	L	S	3
6904	"	.2	R	3	100	S	10	L	S	1
4300	Coy: Lee-Victoria x Fulwin	0	S	4	60	S	10	L	S	3
4560	Mustang	.2	R	2	100	S	20	S	VS	3
5571	(Lee-Victoria) x Fulwin	0	R	5	T	-	0	-	5	3
5717	"	.1	R	5	80	-	50	S	VS	2
6901	"	0	R	4	80	S	100	S	VS	0
5713	Lemont Cross	0	R	3	T	-	10	L	L	1
5363	Clinton x Eairy Culberson	.2	S	3	100	S	100	S	VS	1

1/ 1 = light, 5 = heavy

Table 56 . Forage growth in the Fall and Spring on stations reporting of varieties and hybrid selections included in the Uniform

Special Winter Oat Experiment grown in 1953-54.

(Percentages on forage growth based on Lee (check) equalling 100 o/o)

C. I. No.	Variety or Selection	FALL						SPRING					
		Average 4 Stations	Feeding Hills, Mass.	Hutchinson, Kans.	Mound Valley, Kans.	Stillwater, Okla.	Average 5 Stations	Feeding Hills, Mass.	Beltsville, Md.	Hutchinson, Kans.	Mound Valley, Kans.	Stillwater, Okla.	
5107	LeConte	100.0	95	93	103	109	82.0	85	65	65	101	94	
5850	Arkwin	106.0	105	91	110	118	101.6	80	138	73	112	105	
3424	Wintok	96.8	105	101	91	90	108.0	80	130	116	111	103	
5106	Cimarron: Woodward Composite	100.8	100	96	106	101	111.8	90	138	101	116	114	
5849	Early Wintok Selection	99.3	95	98	104	100	113.6	100	123	114	118	113	
3170	Forkedee	98.8	100	96	99	100	98.8	95	85	95	110	109	
6572	Dubois	101.3	105	94	97	109	100.8	100	78	101	109	116	
6727	Clinton x Forkedee	94.8	100	94	86	99	96.8	95	84	93	106	106	
6728	"	94.8	100	90	88	101	104.4	110	90	100	108	114	
2042	Lee (check)	100.0	100	100	100	100	100.0	100	100	100	100	100	
6903	Lee-Victoria x Forkedee ²	100.5	100	95	101	106	93.6	100	45	100	113	110	
6904	"	98.0	100	91	103	98	82.4	80	20	98	105	109	
4600	Coy: Lee-Victoria x Fulwin	103.5	105	95	106	108	91.2	105	24	110	106	111	
4660	Mustang	97.0	95	99	93	101	84.2	100	9	101	103	108	
6571	(Lee-Victoria) x Fulwin	91.5	97	93	86	90	83.2	100	15	96	104	101	
6717	"	95.0	97	94	94	95	90.6	100	48	95	106	104	
6901	"	103.3	100	94	108	111	85.8	100	12	100	106	111	
6718	Lemont Cross	104.8	105	95	113	106	71.6	105	4	60	98	91	
5368	Clinton x Hairy Culberson	100.3	95	99	98	109	100.4	105	63	108	112	114	

Uniform Fall Sown Oat Experiment

In 1954 this experiment was grown on stations in 12 states as follows:

Ala.	Belle Mina Camden Tallassee	La.	Crowley St. Joseph Baton Rouge
Ark.	Fayetteville Stuttgart	Md.	Beltsville
Fla.	Gainesville Jay Quincy	Miss.	State College Stoneville Stoneville P. S. Co.
Ga.	Athens Experiment Thomasville Tifton	N. C.	Statesville McCullers Plymouth
Ky.	Hopkinsville	S. C.	Hartsville Yemassee
		Tex.	Denton College Station
		Va.	Warsaw

In addition, seed for this nursery was sent to Aberdeen, Idaho, where it was spring-sown for observation and seed increase; to Yemassee, S. C. for observation; to Statesville, N. C., and Experiment, Ga., for growing in the virus nursery; and to Gainesville, Fla., for growing in the rust garden. Baton Rouge, La. and the North Carolina stations were unable to report but data obtained from other points in 1954 are included in Tables 57 to 72, inclusive.

Yield, Bushels per Acre

The winter of 1953-54 was so mild that comparatively little killing occurred in any of the areas where this nursery was grown. As rust was not much of a factor, average yields for 1954 were well up to previous averages for these oats. As in previous reports, yield data from the more northern and the more southern stations are averaged separately. Yield data were received from 11 more northern and 10 more southern stations. One less southern station reported in 1954 than in 1953.

Yields on the more northern stations averaged very good. The highest averages were recorded at Experiment, Ga., Beltsville, Md., and Warsaw, Va. This is surprising considering the fact that much of the eastern seaboard was very dry in the fall of 1953. Only because the winter was mild and killing slight, were yields up to average.

Only eight entries averaged below 70 bushels per acre in this area. The poorest yielders were Sunland and Seminole, two Florida oats, lacking sufficient hardiness for this area. However, their yields were nearly 10 bushels below that of Delair, which likewise lacks hardiness. The highest yielding entries in this area in 1954 were Stanton 1, the Coker entry C. I. 6907, the Kentucky oat C. I. 6717, and Alamo. All averaged in excess of 79 bushels per acre.

On the more southern stations Delair outyielded all other entries and was the only one averaging above 60 bushels per acre. Among the next highest yielders were C. I. 5372, C. I. 6908, Local Check, Mustang, Seminole, Floriland, and Victorgrain. All yielded about 55 bushels per acre. The poorest yielders

in the area were Atlantic and Tenn. Sel., C. I. 6731, which averaged only a little above 40 bushels per acre.

Winter Hardiness

Data on winter survival of entries in this experiment were received from only four points in 1954. No killing was reported at any other point. Few reports showed that stands of the least hardy entries, Seminole, Southland, and Sunland were reduced so severely that none averaged even 50 percent survival; whereas other tender varieties such as Alamo survived over 70 percent, and most entries had four-station average survivals of 80 to 90 percent or above.

Test Weight

Data on test weight were received from 12 stations. Low test weights were reported from Tifton, Ga., Hartsville, S. C., and Quincy, Fla. Some entries gave a light test at Beltsville and at other points. The highest test weights were reported from Hopkinsville, Ky. On the average the highest test weights were recorded for Delair, Alamo and C. I. Nos. 6719 and 6605. All averaged 32 pounds per bushel or better. The lightest tests were recorded for C. I. Nos. 6907, 6574, and 5372, none of which equalled 28 pounds per bushel.

Plant Height

Reports on plant height were received from 15 stations. Oats grew taller at Experiment, Ga., Stoneville, Miss., and Camden, Ala. than at the other points and were shortest at Denton, Tex. On the average, the tallest entries were Atlantic, Sunland and Floriland; all exceeded 41 inches. The shortest oats were C. I. 6908 and Fultex, which measured only 33.3 and 34.3 inches, respectively. Most of the others exceeded three feet.

Standing Ability

Lodging was considerable on ten stations in 1954. Many entries lodged 100 percent at Fayetteville, Ark.; and lodging up to 100 percent in some entries was reported at Hopkinsville, Ky., and Stoneville, Miss. On the average, the weakest strawed entries in 1954 were Appler, Nortex, and C. I. 6729, which lodged in excess of 50 percent. The stiffest strawed entry was C. I. 6719, which lodged only 23.1 percent. Most entries lodged about 30 percent or more.

Date Headed

Data on dates of heading were received from 16 stations in 1954. Many entries headed in March at Gainesville, Jay, Quincy, Crowley, and College Station; and all headed in May at Beltsville. On the average, the earliest entries were Sunland, Delair, Floriland, and Seminole which headed on the average on April 6, 7, 7 and 8, respectively. The latest entries were C. I. Nos. 6717, 6731, and 6582, which headed April 22, 21, and 21, respectively.

Date Ripe

Data on date ripe were received from nine stations. On the average, all entries ripened in May. The first to ripen was Delair, April 19; and the last to reach maturity were DeSoto and C. I. Nos. 6574, 6717, 6571, and 6732, which ripened on May 28.

Disease Resistance

Data on disease reaction of entries in the Uniform Fall Sown Experiment are more extensive than those on any other winter oat nursery. Ten stations reported data on crown rust. Floriland, Seminole and Sunland of the named

varieties and C. I. 6666 of the selections appeared to be about the most crown rust resistant. Most of the entries in this experiment other than the check varieties are comparatively or highly resistant to crown rust. As would be expected, Appller Check appears to be the most susceptible entry.

Data on stem rust were received from two points. C. I. 6666 was outstandingly resistant to stem rust but most of the entries were not resistant. Practically all of those appearing to be resistant to stem rust are derivatives of crosses having Hajira-Joanette or Hajira-Banner in their parentage. It is of considerable interest that C. I. 6571 was designated as resistant to stem rust at College Station, Texas. Just what race was present there is unknown, but a (Lee-Victoria) x Fulwin strain usually would not be expected to have a resistant type reaction. Stem rust resistance in selections of crosses was observed between these parents at College Station some years ago.

Reports on smut infections were received from five points. A number of entries appeared comparatively free from smut at all points; notably C. I. 6908, Seminole, Delair, and C. I. Nos. 6574, 6729, and 6717. A few were smutted at practically all stations. Stanton Strain 1, DeSoto, and Fultex were among the most generally susceptible.

Data on Anthracnose were received from three stations and a few entries appeared to be resistant at all three stations. Data on H. avenae were reported from three stations in Alabama where all entries appeared more or less susceptible although reactions to the disease varied.

Data on H. victoriae blight were received from three points in Alabama, where only C. I. 6732 was entirely free of the disease. It is rather surprising to find Appller and certain other entries to be susceptible. Such results have not previously been noted in other parts of the country and it prompts the question as to whether there are now races of this organism that attack practically all our oat varieties. If so, the oat crop of North America has probably never been in greater jeopardy. The data from Alabama, if reliable, are extremely ominous.

Data on Red Leaf received from four stations indicate that no entry was free from this trouble at all stations, although some variations were evident. Two stations reported data on kernel blight; Appller, C. I. 6666, and Atlantic appeared most susceptible. Three stations in Alabama reported data on halo blight. Only C. I. 5873 was resistant at all three points. A report on downy mildew was also received from three points in Alabama. C. I. 6732 was the only entry resistant at all three points. Data on septoria reported from three stations indicate that no entries were resistant at more than two points. A report on the reaction of the entries in this experiment to mosaic or viruses was received from Experiment, Ga. Many entries were highly resistant, whereas almost an equal number were highly susceptible.

Forage Value and Type of Growth

Only five stations reported on forage growth in the fall in this experiment in 1953-54. This resulted primarily from the fact that the season was so dry in many areas that oats did not emerge until well into the winter and made little growth before winter's onset. Based on Appller's growth equalling 100 percent, the highest averages in the fall were recorded for Southland, Sunland, and Seminole, which averaged 115.8, 114.6, and 113.0 percent, respectively. The lowest rating in the fall was recorded for C. I. 5872, which averaged only 96.6 percent.

Data on spring forage were received from 13 stations. The lowest percents in comparison with Appller were recorded for C. I. Nos. 6717 and 6731. The former averaged only 92.5, whereas the latter averaged 94.8 percent. The highest average forage ratings in 1954 were recorded for Southland and Delair, which gave averages of 117.5 and 117.2 percent of Appller, respectively.

Data on growth type were received from nine stations. As the winter of 1953-54 was similar to that of 1952-53, oats tended to grow throughout the winter on many stations and thus to grow more upright than usual. The most decumbent growing entries were C. I. Nos. 5372, 6729, 6583, and 6732, and Arlington and Mustang.

Table 57 . Entries included in the Uniform Fall Sown Oat Nursery grown in 1953-54.

C. I. No.	Variety or Hybrid	Selection	Seed Source 1/
1815	Local check variety	-	Check 2/
3392	Appler	-	Check
3531	Letoria	Md. XS1110 Pl-20-4-1	Md.
3855	Fultex	Tex. Sel. 12-34-33	Tex.
3923	Stanton 1	Coker 40-5	Md.
4599	DeSoto	Ark. X-2-25-10-1	Ark.
4653	Atlantic	Ark. Sel.	N. C.
4657	Delair	Tex. Resel. 4076-16	Ark.
4660	Arlington	Md. Resel. 5288	N. C.
5207	Mustang	Tex. Resel. 3770-9	Tex.
5371	Southland	Fla. XM 4111-1-13	Fla.
5372	Alamo: (Victoria x Hajira-Banner) x (Fulghum-Victoria)	Tex. 73-44-90	Tex.
5872	(Red Rustproof x Victoria) x Norton	Ga. H842	Ga.
5873	Nortex	S.P.S.C. 0112	Stoneville P.S.Co.
5924	C.I. 4019 x (Fulghum x Victoria)	Stuttgart Sel.	Ark.
6571	Seminole: Appler x (Clinton ₂ -Santa Fe)	Fla. Row 6514	Fla.
6574	Lee-Victoria x Fulwin	Tex. 3770-7	Tex.
6582	(C.I. 4025 x C.I. 4383-C.I. 4189) x Landhafer	Md. Sel. 895-3	Md.
6583	Trispermia x (Clinton ₂ -Santa Fe)	Md. Sel. 2819-3	Md.
6588	C.I. 4658 x (Clinton ₂ -Santa Fe)	Md. Sel. 506-1	Md.
6600	Floriland	Fla. 167 x Landhafer	Fla.
6605	Sunland	Fulgh. (C.I. 708) x Land.: Fla. 12506	Fla.
6666	Atlantic x (Clinton ₂ -Santa Fe)	Ida. Row 229	Md.
6717	(C.I. 4025 x C.I. 4383-C.I. 4189) x Landhafer	Ida. Row 269	Md.
6719	(Lee-Victoria) x Fulwin	Tex. 3770-1	Ky.
6729	(Victoria x Hajira-Banner) x (Fulghum-Victoria)	Tex. 73-46-7	Tex.
6731	Nortex x Trelle Dwarf	S.P.S.C. 41792	Stoneville P.S.Co.
6732	Tenn. 090 x Bond	Tenn. Sel. 286-8	Tenn.
6906	Tenn. 090 x Bond	Tenn. Sel. 313-2	Tenn.
6907	Victor grain	Coker's 48-93 Reg. 1954	Coker's
6908	Santa Fe x (Stanton-Fulgrain)	Coker's 53-13	"
	(Arlington x Delair) x Trispermia	Coker's 53-29	"

1/ The U.S.D.A. and in certain cases additional states cooperated in the production of many of these oats.
2/ Differed on different stations.

Table 58 • Summary of data obtained on the Uniform Fall Sown Oat Experiment grown in 1953-54.

Yield Rank	C.I. No.	Variety or Selection	Acre Yield		Ave. Surv. (4 Sta) %	Test Wt. (12 Sta) Lbs.	Plant Ht. (15 Sta) Ins.	Lodg- ing (12 Sta) %	Head- ing (16 Sta) Date	Forage Growth ^{2/}		Type ^{3/} Growth (9 Sta)
			North Bu. (11 Sta)	South Bu. (10 Sta)						Fall (5 Sta) %	Spring (13 Sta) %	
1	3855	Stanton 1	81.5	26	45.5	30.6	37.6	45.8	4/18	101.8	102.6	D-I
2	6907	Santa Fe x (Stanton-Fulgrain)	80.9	19	49.2	26.8	40.1	46.3	16	99.4	104.6	D-I
3	6717	(Lee-Victoria) x Fulwin	79.6	25	45.6	30.0	37.6	38.9	22	97.4	92.9	D
4	5371	Alamo: (Vict. x H. Ben.) x (Ful. Vict.)	79.3	10	53.5	32.7	35.9	30.7	12	109.8	115.9	I-U
5	3923	DeSoto	78.7	11-12	53.3	31.0	35.5	37.3	19	103.2	106.7	D-I
6	6719	(Victa. x Haj.-Ben.) x (Fulg.-Victa.)	78.6	18	49.8	32.2	34.9	23.1	19	106.2	105.4	I
7	1815	Appler	78.5	11-12	53.3	27.4	38.5	54.5	18	100.0	100.0	D-I
8	6666	(C.I. 4025 x C.I. 4383-C.I. 4189) x Land.	77.8	13	51.8	28.4	37.0	43.3	20	107.4	103.5	D-I
9	1815	Appler	77.8	16	51.2	28.1	38.4	44.6	19	100.0	100.0	D-I
10	6906	Victorgrain '54 Reg.	77.4	8	55.1	31.4	36.8	30.3	14	103.4	104.5	D-I
11	---	Local Check	77.1	4	55.4	30.4	38.7	34.1	17	102.0	109.0	I
12	5372	(Red Rustproof x Victa.) x Norton	76.8	2	56.2	27.9	34.2	45.9	16	99.6	100.7	D
13	4580	Hustang	76.7	5-6	55.3	30.0	37.5	43.0	16	95.4	105.8	D
14	6571	(Lee-Victoria) x Fulwin	76.6	15	51.4	30.0	38.2	33.0	20	97.2	96.2	D-I
15	6729	Nortex x Trelle Dwarf	76.5	9	54.5	28.3	36.7	55.5	17	96.4	98.5	D
16	3392	Letoria	75.9	24	45.8	30.3	37.0	42.1	20	101.4	102.9	D-I
17	5583	C.I. 4658 x (Clinton2-Santa Fe)	74.4	28	45.1	30.6	38.8	32.9	20	106.0	104.6	D-I
18	5873	C.I. 4019 x (Fulghum x Victoria)	73.4	29	44.3	30.3	37.4	30.3	19	106.4	106.5	I
19	6605	Atlantic x (Clinton2-Santa Fe)	73.3	23	47.6	32.0	42.3	31.9	18	110.4	112.6	I
20	5207	Southland	73.2	14	51.5	29.9	38.0	35.6	16	114.6	117.9	U
21	6731	Tenn. 090 x Bond	72.8	32	42.0	28.6	40.3	29.8	21	96.8	95.2	D-I
22	5872	Nortex	72.3	21	47.9	28.2	36.9	53.9	20	95.6	97.3	D
23	4599	Atlantic	71.7	33	41.9	31.3	41.8	45.4	16	104.6	111.2	D-I
24	6908	(Arlington-Delair) x Trispermia	71.1	3	55.6	30.8	33.3	27.2	12	108.0	108.1	I
25	4657	Arlington	71.0	22	47.8	30.3	40.7	38.2	16	106.0	107.8	D-I
26	6574	(C.I. 4025 x C.I. 4383-C.I. 4189) x Land.	69.4	30	43.9	27.3	38.5	42.1	20	103.6	102.8	D-I
27	3531	Fultex	68.4	20	48.2	31.7	34.3	36.7	14	109.6	108.0	I-U
28	6528	Floriland	66.3	7	55.2	29.7	41.1	33.3	7	107.6	112.7	I-U
29	6582	Trispermia x (Clinton2-Santa Fe)	66.0	31	43.7	30.8	40.0	39.6	21	101.2	101.5	I
30	4653	Delair	65.1	1	60.6	32.8	39.0	28.6	7	111.6	117.6	U
31	6732	Tenn. 090 x Bond	63.0	17	45.2	29.6	39.5	24.6	18	96.6	99.2	D
32	6500	Sunland	56.6	27	50.7	29.9	41.6	33.4	6	113.4	115.8	U
33	5924	Seminole	56.1	5-6	55.3	30.3	37.6	37.0	8	111.8	113.5	U

1/ Rank in yield in the South.

2/ Based on Appler = 100 %

3/ D = Decumbent; I = Intermediate; U = Upright: Only the most frequently appearing type of growth is listed.

Table 59. Yields on stations where winters are severe of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment grown in 1953-54.

C.I. No.	Variety or Selection	Average 11 Stations	Ark. Fayetteville	Ark. Stuttgart	Athens, Ga.	Experiment, Ga.	Hopkinsville, Ky.	Bellsville, Md.	State College, Miss.	Stonerville, Miss.	Stonerville, Miss.	Denton, Tex.	Wasson, Va.
							Bushels						
3531	Fultex	68.4	39.5	80.5	68.9	105.5	77.8	97.2	55.6	50.3	58.9	27.7	90.7
6906	Victorgrain:Coker's 48-93 '54 Reg.	77.4	42.6	83.5	66.4	99.5	84.0	131.6	42.6	80.4	73.1	35.2	112.2
6907	Santa Fe x (Stanton-Fulgrain):Coker's 53-13	80.9	49.3	75.1	76.3	1/	82.5	127.2	56.0	94.8	60.3	50.7	110.9
6908	(Arlington-Delaire)x Trispermia:Coker's 53-29	71.1	37.3	68.6	72.0	108.0	89.6	99.0	46.0	69.1	50.4	47.0	95.3
1815	Appler	78.5	43.6	85.7	75.7	120.0	79.4	115.5	48.0	87.3	52.1	50.0	106.6
6588	Floriland:Fla. 167 x Landhafer	66.3	32.7	94.4	73.8	95.4	43.2	101.4	37.7	73.7	53.6	38.3	85.5
5207	Southland	73.2	18.8	81.0	73.1	102.3	81.3	119.7	51.8	73.5	65.7	36.8	101.1
6800	Sunland:Fulghum(C.I.708) x Landhafer	56.6	23.4	50.6	59.3	81.1	62.9	87.8	28.0	72.0	65.7	32.1	76.7
5924	Seminole:Appler x (Clinton ₂ -Santa Fe)	56.1	5.2	57.7	67.9	79.9	53.9	95.5	49.9	61.0	53.4	7.0	85.7
4653	Delaire	65.1	28.6	80.0	79.9	112.5	43.5	109.8	35.8	52.9	51.8	31.8	89.4
6666	(C.I.4025 x C.I.4383-C.I.4189) x Landhafer	77.8	35.4	82.0	70.6	129.1	88.1	99.7	34.6	69.9	68.1	70.5	107.4
6574	"	69.4	35.1	79.1	70.1	110.4	46.7	82.3	36.2	68.8	80.4	66.8	88.0
5873	C.I. 4019 x (Fulghum x Victoria)	73.4	37.0	105.9	64.4	112.1	79.2	93.3	47.4	69.3	54.7	44.3	100.2
5371	Alamo: (Victa. x H-Banner)x(Fulghum-Victoria)	79.3	37.8	95.2	76.8	102.9	98.5	106.3	66.6	81.0	42.7	57.1	107.9
6719	"	78.6	42.3	89.2	73.4	105.5	94.0	88.0	56.2	89.6	78.0	37.3	111.1
5372	(Red Rustproof x Victoria) x Norton	76.8	41.1	87.5	81.2	103.1	88.7	82.4	57.1	78.3	70.2	50.2	104.5
---	Local check variety	77.1	43.6	86.0	76.7	101.4	88.4	103.3	47.0	76.0	62.1	50.3	113.6
6729	Nortex x Trelle Dwarf:S.P.S.C. 41792	76.5	47.1	88.9	75.5	122.2	76.8	99.2	47.6	73.9	61.1	44.2	105.4
5872	Nortex:Stonerville Ped. Seed Co. 0112	72.3	28.4	79.5	80.4	93.8	61.7	98.0	52.4	82.7	63.6	48.9	106.2
6582	Trispermia x(Clinton ₂ -Santa Fe):Sel.2819-3	66.0	19.4	73.7	66.1	99.9	48.3	87.0	38.3	82.2	64.5	54.8	92.3
6605	Atlantic x(Clinton ₂ -Santa Fe):Sel. Row 229	73.3	24.7	82.7	59.0	103.9	84.5	128.6	47.3	74.4	65.7	37.7	97.8
6583	C.I.4658 x (Clinton ₂ -Santa Fe):Sel. 506-1	74.4	25.4	92.0	75.6	104.0	85.3	114.8	43.4	76.3	63.6	38.2	99.8
4657	Arlington	71.0	36.8	73.0	73.0	95.4	63.7	112.8	29.9	73.7	69.3	50.8	102.5
4599	Atlantic	71.7	29.0	78.8	73.0	82.9	73.5	123.5	31.5	88.7	73.7	31.6	102.3
4660	Mustang	76.7	36.9	94.0	72.3	108.8	88.9	105.0	41.2	84.8	57.9	46.1	106.7
6571	(Lee-Victoria)x Fulwin:Tex. 3770-7	76.6	22.1	81.4	80.3	116.0	92.9	102.0	51.2	79.4	66.6	50.4	99.9
6717	"	79.6	31.7	78.4	80.5	127.1	93.1	100.8	58.5	82.8	64.0	58.1	100.1
3923	DeSoto	78.7	34.6	95.1	85.9	121.6	78.5	106.2	43.0	75.8	72.9	48.8	103.1
1815	Appler	77.8	49.8	97.8	76.3	107.4	70.7	99.2	37.6	89.0	68.1	50.0	110.1
3392	Letoria	75.9	45.3	90.8	62.1	114.9	72.9	102.0	51.2	71.9	59.4	60.8	103.4
3855	Stanton ₁	81.5	43.0	80.4	84.7	113.4	95.2	114.2	54.4	83.9	56.9	65.0	105.8
6731	Tenn. 090 x Bond:Tenn. Sel. 286.8	72.8	53.6	68.8	64.9	110.0	90.5	92.4	41.8	64.4	70.7	47.4	96.2
6732	"	63.0	41.9	58.0	56.9	111.1	73.4	100.7	25.1	55.0	48.1	40.9	81.9

1/ Average of station (106.3) substituted for missing data.

Table 60. Yields on stations where winters are mild of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment

grown in 1953-54.

C.I. No.	Variety or Selection	Average 10 Stations	Belle Mead, Ala.	Caden, Ala.	Tallassee, Ala.	Gainesville, Tex.	Clay City, Mo.	Quincy, Ill.	Horton, Mo.	Crowley, La.	Hartsville, S. C.	College Station, Tex.
3531	Fultex	48.2	66.8	52.5	61.5	30.1	45.6	23.0	50.9	30.6	65.0	56.4
6906	Victorgrain; Coker's 48-93 '54 Reg.	55.1	44.2	45.7	55.0	39.2	68.9	42.2	55.5	47.0	67.9	85.0
6907	Santa Fe x (Stanton-Fulgrain); Coker's 53-13	49.2	77.8	45.7	53.9	26.2	45.4	26.9	38.1	32.8	56.4	89.0
6908	(Arlington-Delair) x Trispermia; Coker's 53-29	55.6	76.6	50.8	49.1	37.2	61.2	52.7	50.0	37.2	58.3	83.2
1815	Appler	53.3	64.4	52.2	59.6	32.4	51.4	31.2	39.8	41.0	74.3	86.2
6588	Floriland; Fla. 167 x Landhafer	55.2	60.1	41.7	49.9	55.0	63.1	48.5	65.5	40.0	57.3	70.8
5207	Southland	51.5	80.4	38.6	46.2	22.0	62.2	22.7	61.1	39.2	72.3	70.4
6600	Sunland; Fulghum (C.I. 708) x Landhafer	50.7	78.8	52.2	53.6	44.3	45.9	32.8	61.2	25.6	40.6	71.9
5924	Seminole; Appler x (Clinton ² - Santa Fe)	55.3	48.5	47.4	42.6	57.9	64.6	52.6	60.7	33.8	74.0	70.7
4653	Delair	60.6	63.3	49.7	57.6	58.5	63.8	50.0	68.9	47.0	69.5	77.4
6666	(C.I. 4025 x C.I. 4383-C.I. 4189) x Landhafer	51.8	76.0	52.8	60.7	20.6	57.0	30.3	40.1	29.8	59.4	91.0
6574	"	43.9	46.5	66.9	46.2	23.8	49.7	22.8	29.1	20.8	52.7	80.8
5873	C.I. 4019 x (Fulghum x Victoria)	44.3	63.8	44.0	43.7	22.6	62.1	14.7	42.4	29.6	53.1	66.6
5371	Alamo; (Victoria x H-Banner) x (Fulghum-Victoria)	53.5	57.0	54.2	62.7	38.0	79.6	36.7	62.2	27.4	64.0	83.5
6719	"	49.8	54.5	43.4	45.7	28.6	63.9	36.4	34.5	42.8	70.8	77.0
5372	(Red Rustproof x Victoria) x Norton	56.2	85.7	49.1	57.9	34.7	68.2	45.4	52.2	26.0	59.1	83.8
----	Local check variety	55.4	70.9	55.9	66.4	38.5	61.4	30.5	36.7	46.8	67.9	79.2
6729	Nortex x Trelle Dwarf; S.P.S.C. 41792	54.5	72.6	54.8	64.1	30.0	48.4	21.1	39.5	47.4	76.1	91.4
5872	Nortex; Stoneville Ped. Seed Co. 0112	47.9	51.1	53.9	48.8	25.0	53.5	24.5	39.5	32.2	71.4	78.7
6582	Trispermia x (Clinton ² - Santa Fe); Sel. 2819-3	43.7	65.1	41.7	54.5	21.4	44.7	21.1	28.4	39.2	58.3	63.0
6605	Atlantic x (Clinton ² - Santa Fe); Sel. Row 229	47.6	59.0	57.0	52.5	34.9	67.3	31.5	35.8	17.6	58.7	62.0
6583	C.I. 4658 x (Clinton ² - Santa Fe); Sel. 506-1	45.1	60.7	44.0	64.7	25.4	54.7	23.0	26.7	27.4	63.7	60.8
4657	Arlington	47.8	64.6	46.5	48.2	23.1	55.1	30.1	38.2	31.6	67.1	73.0
4599	Atlantic	41.9	31.5	53.6	57.0	27.1	50.9	14.5	42.0	14.0	59.5	68.6
4660	Mustang	55.3	86.8	52.2	62.4	30.0	73.1	11.1	54.5	19.0	60.8	83.8
6571	(Lee-Victoria) x Fulwin; Tex. 3770-7	51.4	70.1	51.9	56.2	25.9	66.1	11.1	41.6	25.8	21.7	83.2
6717	" ; Tex. 3770-1	45.6	62.1	43.7	54.8	19.7	59.1	19.1	36.1	28.0	60.7	72.8
3923	DeSoto	53.3	68.9	46.0	55.0	34.0	62.0	35.2	44.1	33.0	80.1	74.2
1815	Appler	51.2	57.3	44.2	54.2	30.4	49.0	31.7	40.0	49.2	70.0	86.2
3392	Ietoria	45.8	56.2	49.9	44.0	26.8	64.3	29.1	37.7	35.2	55.4	59.7
3855	Stanton 1	45.5	66.4	44.3	58.7	22.5	56.4	31.5	35.1	13.8	55.1	71.2
6731	Tenn. 090 x Bond; Tenn. Sel. 286-8	42.0	63.8	38.6	48.5	33.8	39.1	10.1	22.4	31.2	59.5	73.2
6732	" ; Tenn. Sel. 313-2	45.2	76.6	47.1	78.9	49.2	31.5	14.3	36.2	10.6	46.3	61.0

1/ Average of station {30.2} substituted for missing data.
 2/ Average of station {62.7} substituted for missing data.

Table 61 . Survival of varieties included in the Uniform Fall Sown Oat Experiment in 1953-54.

C. I. No.	Variety or selection	Average Stations	Fayetteville, Ark.	Atlanta, Ga.	Beltsville, Md.	Denton, Tex.
3531	Fulter	87.8	90	100	83	78
6906	Victor grain; Coker's 48-93 '54 Reg.	92.5	90	99	98	83
6907	Santa Fe x (Stanton-Fulghum); Coker's 53-13	91.3	95	100	95	75
6908	(Arlington-Delair) x Trispermia; Coker's 53-29	81.0	85	99	95	45
1815	Appler	87.0	85	100	100	63
6588	Floriland; Fla. 167 x Landhafer	68.3	80	90	89	14
5207	Southland	44.0	5	80	87	4
6600	Sunland; Fulghum (C.I. 708) x Landhafer	48.8	20	83	82	10
5924	Seminole; Appler x (Clinton ² - Santa Fe)	40.8	5	84	73	1
4653	Delair	88.8	80	100	100	75
6666	(C.I. 4025 x C.I. 4383-C.I. 4189) x Landhafer	69.3	50	99	100	28
6574	"	73.5	75	100	94	25
5873	C.I. 4019 x (Fulghum x Victoria)	74.3	50	100	87	60
5371	Alamo; (Victoria x H-Banner) x (Fulghum-Victoria)	72.3	75	90	89	35
6719	"	77.8	80	100	81	50
5372	(Red Rustproof x Victoria) x Norton	93.5	95	100	84	95
----	Local check variety	89.5	95	100	88	75
6729	Nortex x Trelle Dwarf; S.P.S.C. 41792	91.3	85	100	97	83
5872	Nortex; Stoneville Ped. Seed Co. 0112	90.3	85	100	93	83
6582	Trispermia x (Clinton ² - Santa Fe); Sel. 2819-3	67.0	80	95	84	9
6605	Atlantic x (Clinton ² - Santa Fe); Sel. Row 229	80.0	80	98	89	53
6583	C.I. 4658 x (Clinton ² - Santa Fe); Sel. 506-1	93.0	90	98	91	93
4657	Arlington	93.3	95	100	94	84
4599	Atlantic	98.5	95	100	100	99
4660	Mustang	94.8	95	98	86	100
6571	(Lee-Victoria) x Fulwin; Tex. 3770-7	94.0	95	100	81	100
6717	" ; Tex. 3770-1	95.0	95	100	85	100
3923	DeSoto	92.5	95	100	91	84
1815	Appler	86.3	90	100	92	63
3392	Letoria	96.0	95	100	93	96
3855	Stanton 1	94.5	90	100	95	93
6731	Tenn. 090 x Bond; Tenn. Sel. 286-8	97.3	95	100	94	100
6732	" ; Tenn. Sel. 313-2	96.8	95	100	92	100

1/ 100 o/o survival was reported at Stuttgart, Ark.; Experiment, Ga.; Stoneville, Miss.; and Warsaw, Va.

Table 62 . Test weights on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment

grown in 1953-54.

C. I. No.	Variety or Selection	Average 12 Stations	Ark.	Quincy, Fla.	Athens, Ga.	Tifton, Ga.	Hopkinsville, Ky.	Beltville, Md.	Stoneville, Miss.	Stoneville P.S.C., Miss.	Hartsville, S. C.	Denton, Tex.	College Sta- tion, Tex.	Warsaw, Va.
3531	Fultex	31.7	32.0	28.5	29.0	29.5	37.2	30.5	31.0	31.0	28.1	32.0	38.0	33.5
6906	Victorgrain; Coker's 48-93 '54 Reg.	31.4	31.5	31.0	31.0	28.5	35.3	31.5	32.0	27.0	29.2	32.0	36.0	31.2
6907	Santa Fe x (Stanton-Fulgrain); Coker's 53-13	26.8	25.5	23.5	28.5	22.0	29.5	27.0	27.0	29.0	23.0	33.0	26.0	27.4
6908	(Arlington-Delair) x Trispermia; Coker's 53-29	30.8	30.5	31.5	31.0	29.0	32.7	28.0	29.0	32.0	29.7	33.0	32.0	31.0
1815	Appler	27.4	29.0	24.0	27.5	22.0	33.8	22.5	25.0	30.0	24.4	30.0	31.0	29.8
6588	Florland; Fla. 167 x Landhafer	29.7	31.0	28.0	27.5	30.0	30.7	25.5	32.0	32.0	26.2	31.0	34.0	28.0
5207	Southland	29.9	30.5	25.0	31.0	30.0	32.7	27.5	31.0	31.0	29.3	27.0	31.0	32.4
6600	Sunland; Fulghum (C.I. 708) x Landhafer	29.9	29.5	27.0	27.5	31.5	33.9	28.5	33.0	31.0	23.0	32.0	35.0	27.2
5924	Seminole; Appler x (Clinton ² - Santa Fe)	30.3	29.5	29.5	29.5	30.0	34.6	25.5	32.0	32.0	28.0	3/	31.0	30.5
4653	Delair	32.8	31.5	32.0	31.0	32.5	37.5	30.0	34.0	32.0	30.9	34.0	35.0	33.3
6666	(C.I. 4025 x C.I. 4383-C.I. 4189) x Landhafer	28.4	27.5	26.5	26.5	24.0	36.8	27.0	25.0	30.0	24.3	31.0	32.0	30.7
6574	"	27.3	27.5	25.0	22.0	22.5	32.6	25.0	26.0	31.0	24.6	31.0	31.0	29.8
5873	C.I. 4019 x (Fulghum x Victoria)	30.3	33.0	31.0	29.0	25.5	30.4	28.0	31.0	31.0	28.6	30.0	33.0	33.5
5371	Alamo; (Victoria x H-Banner) x (Fulghum-Victoria)	32.7	31.5	31.5	31.5	32.0	36.2	31.5	33.0	31.0	32.4	34.0	34.0	33.8
6719	"	32.2	32.5	32.0	31.5	26.5	35.3	29.0	34.0	31.0	30.9	35.0	34.0	34.8
5372	(Red Rustproof x Victoria) x Norton	27.9	26.5	28.0	28.5	29.0	31.7	24.0	27.0	29.0	25.9	28.0	28.0	28.6
-----	Local check variety	30.4	31.0	29.5	27.5	22.0	36.0	33.0	29.0	29.0	30.3	29.0	33.0	35.1
6729	Nortex x Trelle Dwarf; S.P.S.C. 41792	28.3	31.5	25.0	28.0	22.0	34.4	21.0	29.0	29.0	27.1	30.0	33.0	29.9
5872	Nortex; Stoneville Ped. Seed Co. 0112	28.2	30.0	25.0	27.5	22.0	32.9	22.5	29.0	30.0	26.7	30.0	32.0	30.8
6582	Trispermia x (Clinton ² - Santa Fe); Sel. 2819-3	30.8	31.5	30.5	33.0	22.5	34.5	30.0	30.0	32.0	30.8	29.0	32.0	33.2
6605	Atlantic x (Clinton ² - Santa Fe); Sel. Row 229	32.0	32.0	29.0	34.5	25.5	36.0	33.0	32.0	31.0	31.0	32.0	34.0	34.4
6583	C.I. 4658 x (Clinton ² - Santa Fe); Sel. 506-1	30.6	31.0	28.0	32.5	22.5	35.2	31.5	28.0	32.0	29.6	31.0	33.0	33.4
4657	Arlington	30.3	28.0	28.5	31.0	29.0	37.1	32.0	29.0	30.0	25.3	31.0	31.0	31.6
4599	Atlantic	31.3	29.5	31.0	30.5	29.0	36.8	32.0	31.0	29.0	29.1	30.0	35.0	32.5
4660	Mustang	30.0	30.0	1/	31.0	27.5	34.5	28.0	30.0	29.0	29.3	30.0	33.0	29.3
6571	(Lee-Victoria) x Fulwin; Tex. 3770-7	30.0	31.5	1/	32.5	21.0	35.3	29.0	31.0	29.0	2/	30.0	30.0	34.5
6717	"	30.0	29.5	27.5	33.5	21.0	35.7	29.0	31.0	32.0	28.3	31.0	28.0	33.5
3923	DeSoto	31.0	31.5	27.5	34.5	26.0	35.4	29.5	28.0	32.0	31.0	31.0	31.0	34.0
1815	Appler	28.1	29.0	24.0	30.0	22.0	36.9	20.5	27.0	30.0	26.6	4/	31.0	30.0
3392	Letoria	30.3	32.5	28.5	30.5	22.0	31.8	30.0	31.0	30.0	30.9	31.0	32.0	33.1
3855	Stanton 1	30.6	30.5	29.5	31.5	20.0	36.5	30.0	31.0	30.0	31.4	32.0	33.0	31.5
6731	Tenn. 090 x Bond; Tenn. Sel. 286-8	28.6	29.0	26.0	30.5	16.0	33.8	26.0	29.0	30.0	28.0	31.0	32.0	32.3
6732	"	29.6	28.5	28.0	34.5	25.0	35.3	28.0	28.0	29.0	29.2	29.0	30.0	31.0

1/ Destroyed by crown rust; average of station (28.1) substituted.

2/ Unknown oat; not C.I. 6571. Average of station (28.2) substituted.

3/ Average of station (30.9) substituted for missing data.

4/ Data from other row of Appler substituted since Appler appeared only once.

Table 63. Plant heights on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment

grown in 1953-54.

C. I. No.	Variety or Selection	Average 15 Stations	Belle Mina, Ala.	Caden, Ala.	Tallassee, Ala.	Stuttgart, Ark.	Gainesville, Fla.	Quincy, Fla.	Athens, Ga.	Experiment, Ga.	Tifton, Ga.	Hopkinsville, Ky.	Beltsville, Md.	Stonerville, Miss.	Denton, Tex.	College Sta- tion, Tex.	Warsaw, Va.
			Inches														
3531	Fultex	34.3	35.0 ^{1/2}	43.0	40.0	33.0	29.0	29.0	29.0	41.0	39.0	44.0	36.0	38.0	21.0	28.0	29.0
6906	Victorgrain; Coker's 48-93 '54 Reg.	36.8	35.0 ^{1/2}	44.0	39.0	37.0	37.0	30.0	31.0	44.0	39.0	39.0	43.0	44.0	23.0	33.0	33.5
6907	S.F. x (Stant.-Fulgr.); Coker's 53-13	40.1	41.0	48.0	47.0	35.0	42.0	31.0	38.0	2/	41.0	42.0	44.0	46.0	26.0	39.0	34.2
6908	(Arl.-Del.) x Trisp.; Coker's 53-29	33.3	33.0	40.0	34.0	33.0	39.0	27.0	25.0	38.0	35.0	39.0	36.0	40.0	23.0	27.0	30.7
1815	Appler (check)	38.5	42.0	48.0	41.0	36.0	39.0	32.0	34.0	47.0	38.0	44.0	44.0	42.0	24.0	32.0	34.2
6588	Floriland; Fla. 167 x Landhafer	41.1	42.0	47.0	44.0	40.0	40.0	35.0	36.0	51.0	47.0	46.0	46.0	48.0	27.0	33.0	34.7
5207	Southland	39.0	36.0 ^{1/2}	42.0	36.0	32.0	42.0	35.0	34.0	50.0	45.0	43.0	43.0	45.0	23.0	32.0	32.0
6600	Sunland; Fulgh. (C.I. 708) x Land.	41.6	41.0 ^{1/2}	45.0	43.0	35.0	48.0	37.0	36.0	52.0	48.0	45.0	47.0	46.0	29.0	35.0	37.2
5924	Seminole; Appler x (Cl. 2 -S.F.)	37.6	40.0 ^{1/2}	47.0	41.0	32.0	39.0	32.0	34.0	44.0	40.0	41.0	43.0	42.0	3/	30.0	33.2
4653	Delair	39.0	41.0	48.0	43.0	34.0	42.0	37.0	34.0	51.0	41.0	36.0	44.0	45.0	26.0	31.0	32.5
6666	(H-J. x Cl. 4383-Cl. 4189) x Land.	37.0	39.0	44.0	36.0	36.0	38.0	29.0	30.0	47.0	36.0	38.0	44.0	43.0	26.0	33.0	36.7
6574	" " " " " "	38.5	39.0	47.0	40.0	39.0	39.0	30.0	33.0	49.0	38.0	4/	43.0	42.0	28.0	31.0	37.2
5873	C.I. 4019 x (Fulgh. x Victa.)	37.4	38.0	43.0	40.0	36.0	38.0	28.0	36.0	49.0	39.0	46.0	40.0	43.0	23.0	27.0	34.7
5371	(Victa. x H-B) x (Fulgh.-Victa.); Alam	35.9	37.0	43.0	43.0	32.0	35.0	30.0	31.0	46.0	37.0	42.0	38.0	42.0	23.0	29.0	31.0
6719	" " " " " "	34.9	39.0	45.0	39.0	34.0	34.0	27.0	28.0	44.0	35.0	43.0	35.0	43.0	22.0	25.0	30.7
5372	(Red Rustproof x Victa.) x Norton	34.2	39.0	43.0	43.0	30.0	36.0	27.0	27.0	42.0	35.0	37.0	34.0	39.0	25.0	27.0	29.7
Local check variety		38.7	42.0	47.0	43.0	32.0	41.0	29.0	35.0	48.0	35.0	46.0	42.0	39.0	27.0	36.0	38.0
6729	Nortex x Trelle Dwarf	36.7	38.0 ^{1/2}	44.0	37.0	35.0	38.0	28.0	36.0	47.0	35.0	41.0	40.0	39.0	24.0	34.0	34.7
5872	Nortex; S.P.S.C. 0112	36.9	36.0 ^{1/2}	43.0	40.0	36.0	39.0	28.0	34.0	48.0	35.0	39.0	41.0	42.0	26.0	32.0	34.5
6582	Trisp. x (Cl. 2 -S.F.); Sel. 2819-3	40.0	40.0 ^{1/2}	46.0	42.0	34.0	42.0	32.0	36.0	49.0	37.0	42.0	42.0	49.0	36.0	36.0	37.2
6605	Atl. x (Cl. 2 -S.F.); Sel. Row 229	42.3	41.0	47.0	38.0	41.0	48.0	33.0	40.0	50.0	42.0	46.0	50.0	52.0	31.0	35.0	40.2
6583	C.I. 4658 x (Cl. 2 -S.F.); Sel. 506-1	38.8	42.0	45.0	38.0	41.0	39.0	33.0	37.0	50.0	36.0	43.0	44.0	47.0	26.0	26.0	35.5
4657	Arlington	40.7	45.0 ^{1/2}	46.0	36.0	29.0	46.0	38.0	37.0	54.0	42.0	44.0	44.0	49.0	31.0	32.0	38.0
4599	Atlantic	41.8	42.0 ^{1/2}	46.0	40.0	38.0	47.0	39.0	38.0	53.0	43.0	43.0	45.0	51.0	31.0	33.0	38.2
4660	Mustang	37.5	39.0	45.0	39.0	36.0	43.0	5/	31.0	44.0	37.0	40.0	41.0	46.0	26.0	30.0	34.5
6571	(Lee-Victa.) x Fulwin; Tex. 3770-7	38.2	42.0	48.0	39.0	37.0	39.0	5/	32.0	44.0	38.0	44.0	40.0	45.0	28.0	30.0	36.0
6717	" " " " " "	37.6	39.0	46.0	39.0	37.0	37.0	28.0	34.0	45.0	38.0	44.0	41.0	44.0	28.0	28.0	36.2
3923	DeSoto	35.5	41.0	43.0	39.0	32.0	39.0	28.0	31.0	43.0	34.0	41.0	37.0	44.0	24.0	27.0	30.2
1815	Appler (check)	38.4	41.0 ^{1/2}	49.0	40.0	37.0	42.0	29.0	34.0	49.0	37.0	44.0	41.0	43.0	6/	32.0	34.7
3392	Letoria	37.0	39.0 ^{1/2}	43.0	35.0	37.0	40.0	32.0	31.0	44.0	38.0	42.0	40.0	42.0	25.0	31.0	35.7
3855	Stanton 1	37.6	37.0 ^{1/2}	43.0	40.0	36.0	39.0	30.0	33.0	45.0	38.0	43.0	40.0	45.0	30.0	29.0	35.7
6731	Tenn. 090 x Bond; Tenn. Sel. 286-8	40.3	42.0 ^{1/2}	47.0	41.0	39.0	54.0	29.0	34.0	47.0	36.0	46.0	42.0	46.0	27.0	36.0	39.2
6732	" " " " " "	39.5	41.0	46.0	43.0	41.0	46.0	28.0	35.0	45.0	42.0	44.0	42.0	43.0	26.0	32.0	38.0

1/ Data from fewer than 3 replicates.

2/ Average of station (46.9) substituted for missing data.

3/ Average of station (26.3) substituted for missing data.

4/ Heterozygous; average of station (42.4) substituted for missing data.

5/ Destroyed by crown rust; average of station (31.0) substituted.

6/ Data from other row of Appler substituted since Appler appeared only once.

Table 64. Percent of lodging on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment

grown in 1953-54.

C.I. No.	Variety or selection	Average 12 Stations	Belle Mina, Ala.	Camden, Ala.	Fallassee, Ala.	Fayetteville, Ark.	Jay, Tla.	Athens, Ga.	Hopkinsville, Ky.	Crown Pt., La.	Beltsville, Md.	State College, Miss.	Stoneville, Miss.	Stoneville, S.C., Miss.	Marsax, Va.
Percent															
3531	Fultex	36.7	0	0	43.0	100.0	0	0	75.0	-	33.0	92.0	94.0	3.3	0
6906	Victorgrain:Coker's 48-93 '54 Reg.	30.3	5.0	13.0	43.0	100.0	0	0	0	-	35.0	77.0	86.0	4.0	0
6907	Santa Fe x (Stanton-Fulgrain):Coker's 53-13	46.3	7.0	10.0	60.0	100.0	0	32.0	97.0	2	50.0	97.0	92.0	4.5	6.0
6908	(Arlington-Delair)x Trispermia:Coker's 53-29	27.2	5.0	5.0	42.0	10.0	0	14.0	8.0	1	60.0	100.0	78.0	4.0	0
1815	Appler	54.5	5.0	33.0	48.0	100.0	15.0	93.0	90.0	2	70.0	98.0	96.0	4.8	1.0
6588	Floriland:Fla. 167 x Landhafer	33.3	8.0	2.0	73.0	80.0	0	16.0	22.0	2	35.0	81.0	78.0	4.5	0
5207	Southland	35.8	8.0	40.0	83.0	100.0	0	9.0	2.0	-	35.0	77.0	72.0	3.3	0
6600	Sunland:Fulghum(C.I. 708) x Landhafer	33.4	50.0	12.0	53.0	0	0	35.0	18.0	3	30.0	98.0	100.0	4.3	0
5924	Seminole:Appler x (Clinton ² - Santa Fe)	37.0	15.0	58.0	47.0	10.0	0	15.0	72.0	2	30.0	97.0	91.0	4.8	4.0
4653	Delair	28.6	0	0	22.0	100.0	0	5.0	27.0	1	15.0	88.0	83.0	3.3	0
6666	(C.I. 4025 x C.I. 4383-C.I. 4189) x Landhafer	43.3	8.0	23.0	60.0	100.0	0	33.0	100.0	2	25.0	92.0	76.0	2.0	0
6574	"	42.1	33.0	35.0	70.0	100.0	0	30.0	8.0	3	35.0	97.0	94.0	2.8	0
5873	C.I. 4019 x (Fulghum x Victoria)	30.3	20.0	40.0	72.0	100.0	0	10.0	0	-	20.0	36.0	64.0	1.8	0
5371	Alamo: (Victa.x H -Banner)x(Fulghum-Victoria)	30.7	17.0	33.0	67.0	100.0	0	3.0	0	-	23.0	50.0	72.0	3.8	0
6719	"	23.1	20.0	3.0	63.0	100.0	0	4.0	0	-	10.0	55.0	20.0	1.8	0
5372	(Red Rustproof x Victoria) x Norton	45.9	37.0	17.0	62.0	100.0	0	20.0	85.0	-	45.0	95.0	86.0	3.3	0
-----	Local check variety	34.1	8.0	0	32.0	20.0	0	66.0	100.0	T	20.0	67.0	92.0	4.0	0
6729	Nortex x Trelle Dwarf:S.P.S.C. 41792	55.5	23.0	68.0	85.0	100.0	0	60.0	90.0	-	40.0	100.0	96.0	4.5	0
5872	Nortex:Stoneville Ped. Seed Co. 0112	53.9	50.0	35.0	90.0	100.0	0	40.0	100.0	1	40.0	95.0	94.0	3.3	0
6582	Trispermia x (Clinton ² - Santa Fe):Sel. 2819-3	39.6	25.0	48.0	90.0	100.0	0	3.0	30.0	1	30.0	72.0	74.0	2.8	0
6605	Atlantic x (Clinton ² - Santa Fe):Sel. Row 229	31.9	23.0	0	33.0	100.0	0	29.0	55.0	1	10.0	63.0	67.0	3.3	0
6583	C.I. 4658 x (Clinton ² - Santa Fe):Sel. 506-1	32.9	25.0	0	33.0	40.0	0	10.0	100.0	-	50.0	63.0	72.0	1.3	0
4657	Arlington	38.2	12.0	18.0	77.0	100.0	0	10.0	55.0	-	48.0	67.0	67.0	3.8	0
4599	Atlantic	45.4	38.0	35.0	90.0	100.0	0	14.0	100.0	-	40.0	62.0	63.0	2.3	0
4660	Mustang	43.0	15.0	45.0	77.0	100.0	0	10.0	97.0	-	45.0	62.0	62.0	2.8	0
6571	(Lee-Victoria) x Fulwin:Tex. 3770-7	33.0	3.0	33.0	43.0	100.0	0	3.0	25.0	-	38.0	90.0	60.0	1.5	0
6717	" " :Tex. 3770-1	38.9	28.0	43.0	77.0	100.0	0	4.0	45.0	-	23.0	72.0	73.0	1.8	0
3923	DeSoto	37.3	27.0	23.0	67.0	100.0	0	0	32.0	-	18.0	98.0	80.0	2.3	0
1815	Appler	44.6	7.0	42.0	88.0	100.0	15.0	35.0	17.0	-	50.0	87.0	90.0	4.5	0
3392	Letoria	42.1	18.0	45.0	65.0	100.0	0	20.0	80.0	-	25.0	92.0	58.0	1.8	0
3855	Stanton 1	45.8	50.0	55.0	77.0	100.0	0	10.0	87.0	-	15.0	75.0	78.0	2.3	0
6731	Tenn. 090 x Bond:Tenn. Sel. 286-8	29.8	38.0	36.0	72.0	100.0	0	2.0	0	-	0	50.0	56.0	3.8	0
6732	" " :Tenn. Sel. 313-2	24.6	8.0	2.0	37.0	100.0	0	5.0	7.0	-	8.0	72.0	54.0	2.3	0

1/ Data incomplete, not included in average.

Table 65. Dates of heading on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment

grown in 1953-54.

C. I. No.	Variety or Selection	Average 16 Stations	Fayetteville, Ark.	Stuttgart, Ark.	Gainesville, Fla.	Jay, Fla.	Quincy, Fla.	Athens, Ga.	Experiment, Ga.	Tifton, Ga.	Hopkinsville, Ky.	Crowley, La.	Boltsville, Md.	Stoneville, Miss.	Stoneville P.S.C., Miss.	Denton, Tex.	College Station Tex.	Warsaw, Va.
3531	Fulter	4/14	4/19	4/15	3/29	4/11	4/6	4/20	4/10	4/5	5/12	3/22	5/9	4/21	4/18	4/10	3/27	4/23
6906	Victorgrain;Coker's 48-93 '54 Reg.	14	19	16	29	8	5	19	10	7	5	21	7	20	18	11	27	22
6907	Santa Fe x (Stanton-Fulgrain);Coker's 53-13	16	23	21	29	7	9	21	10	8	17	18	9	20	22	10	4/2	25
6908	(Arlington-Delair)x Trispermia;Coker's 53-29	12	25	16	22	2	3/29	19	8	2	11	17	6	17	15	10	3/23	22
1815	Appler	18	25	21	31	13	4/10	24	17	11	14	26	10	25	22	16	4/5	17
6588	Floriland;Fla. 167 x Landhafer	7	19	10	10	3/30	3/24	14	7	7	5	5	5	12	9	10	3/20	20
5207	Southland	16	27	16	22	4/7	4/4	24	9	4	15	21	12	18	20	21	30	26
6800	Sunland;Fulghum(C.I.708) x Landhafer	6	20	12	2/28	3/27	3/26	12	7	3/27	2	2/28	7	12	11	15	20	20
5924	Seminole;Appler x (Clinton ₂ -Santa Fe)	8	20	13	19	27	21	20	9	25	11	3/8	10	13	12	21	20	24
4653	Delair	7	16	12	3/15	4/1	27	12	7	30	4/30	10	5	10	11	7	21	19
6666	(C.I.4025 x C.I.4383-C.I.4189) x Landhafer	20	25	22	1/1	15	4/12	24	20	4/13	5/13	28	13	25	25	18	4/3	30
6574	"	20	27	20	30	12	11	24	17	8	12	28	12	23	25	18	6	29
5873	C.I.4019 x (Fulghum x Victoria)	19	27	23	29	13	6	25	9	8	20	27	15	24	27	18	5	29
5371	Alamo; (Victa. x B-Banner)x(Fulghum-Victoria)	12	20	9	15	4	4	19	7	5	6	28	7	15	17	12	3/26	20
6719	"	19	27	22	30	13	9	26	16	13	17	15	15	24	25	16	4/1	27
5372	(Red Rustproof x Victoria) x Norton	16	23	16	28	6	4	22	14	5	12	25	9	25	22	9	1	24
---	Local check variety	17	23	16	22	3/30	8	23	15	12	11	22	12	25	25	15	6	29
6729	Nortex x Trelle Dwarf;S.P.S.C. 41792	17	25	22	4/3	4/15	12	24	19	12	12	2/20	11	25	23	14	4	28
5872	Nortex;Stoneville Ped. Seed Co. 0112	20	25	22	3	15	12	24	18	12	11	3/27	10	26	25	15	4	28
5882	Trispermia x(Clinton ₂ -Santa Fe);Sel.2819-3	21	27	23	3/29	14	9	27	17	12	21	27	13	25	26	17	3	5/1
6805	Atlantic x(Clinton ₂ -Santa Fe);Sel. Row 229	18	25	21	29	10	6	22	19	10	13	29	10	19	20	14	4	4/27
6583	C.I. 4658 x(Clinton ₂ -Santa Fe);Sel. 506-1	20	25	23	4/4	14	13	24	20	14	14	27	11	23	24	15	4	27
4657	Arlington	16	23	17	1	9	8	20	14	9	10	31	7	20	18	12	1	24
4599	Atlantic	16	22	17	3/30	11	8	20	13	8	8	27	7	17	20	14	1	24
4660	Mustang	16	25	17	29	10	5	22	14	7	8	24	7	21	21	12	5	26
6571	(Lee-Victoria) x Fulwin;Tex. 3770-7	20	27	22	29	13	11	27	21	14	17	15	17	26	27	17	3	30
6717	" " ;Tex. 3770-1	22	28	24	4/6	14	11	27	21	14	17	27	19	27	27	16	1	5/1
3923	DeSoto	19	24	20	2	11	10	25	17	12	19	27	10	22	23	17	6	4/26
1815	Appler	19	25	21	2	13	10	24	15	11	15	25	7	25	23	2/16	5	27
3392	Letoria	20	23	23	6	12	12	24	19	14	18	26	9	24	23	16	8	28
3855	Stanton 1	18	25	17	6	10	7	22	19	14	14	27	7	18	23	13	5	27
6731	Tenn. 090 x Bond;Tenn. Sel. 286-8	21	27	23	3/22	18	14	26	20	16	17	26	11	26	25	15	11	29
6732	" " ;Tenn. Sel. 313-2	18	27	26	2/19	9	8	26	14	8	18	4/1	11	29	26	12	10	29

1/ Average of station (3/27) substituted for missing data.

2/ Data from other row of Appler substituted since Appler appeared only once.

Table 66. Dates of ripening on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat Experiment

grown in 1953-54.

C. I. No.	Variety or Selection	Average 9 Stations	Belle Mine, Ala.	Tallahassee, Ala.	Athens, Ga.	Crowley, La.	Bellsville, Md.	Stoneville, Miss.	Stoneville, P.S.C., Miss.	College Station, Tex.	Denton, Tex.
3531	Fultex	5/22	6/7 1/2	5/25	5/21	4/27	6/18	5/24	5/28	4/29	5/12
6906	Victorgrain; Coker's 48-93 '54 Reg.	22	10 1/2	27	21	27	13	22	26	30	18
6907	Santa Fe x (Stanton-Fulghum); Coker's 53-13	23	15 1/2	24	24	27	18	24	21	5/1	18
6908	(Arlington-Delair) x Trispermia; Coker's 53-29	22	12	25	22	27	17	25	27	4/23	18
1815	Appler	25	17	25	29	27	17	27	28	5/4	20
6588	Floriland; Fla. 167 x Lendhafer	21	14 1/2	25	19	27	15	18	24	4/26	19
5207	Southland	24	13 1/2	25	30	27	18	21	28	30	23
6600	Sunland; Fulghum (C.I. 708) x Lendhafer	21	10 1/2	25	19	27	16	17	24	25	19
5924	Seminole; Appler x (Clinton ² - Santa Fe)	22	12	27	23	27	21	17	24	25	2/15
4653	Delair	19	10	25	17	27	13	16	20	23	15
6666	(C.I. 4025 x C.I. 4383-C.I. 4189) x Lendhafer	27	13	27	6/1	5/8	18	27	28	5/4	21
6574	"	28	17	30	1	8	21	27	28	5	21
5873	C.I. 4019 x (Fulghum x Victoria)	27	13	25	1	8	22	26	27	4	20
5371	Alamo; (Victoria x H-Banner) x (Fulghum-Victoria)	23	11	25	5/22	8	18	19	19	4/28	18
6719	"	25	12	23	31	4/27	22	24	26	5/3	19
5372	(Red Rustproof x Victoria) x Norton	24	11	25	24	5/4	30	26	24	1	18
---	Local check variety	25	13	30	28	4/27	22	27	16	4	20
6729	Nortex x Trelle Dwarf; S.P.S.C. 41792	24	11	27	29	27	18	27	17	3	20
5872	Nortex; Stoneville Fed. Seed Co. 0112	25	12 1/2	27	29	27	18	27	26	2	20
6582	Trispermia x (Clinton ² - Santa Fe); Sel. 2819-3	25	14 1/2	25	6/1	27	22	26	26	1	20
6605	Atlantic x (Clinton ² - Santa Fe); Sel. Row 229	24	15	30	5/27	5/8	17	20	15	2	20
6583	C.I. 4658 x (Clinton ² - Santa Fe); Sel. 506-1	26	12	27	29	4	17	26	6/3	2	20
4657	Arlington	25	18 1/2	23	24	8	17	24	5/30	4/29	18
4599	Atlantic	24	18 1/2	25	22	4	15	21	31	5/2	17
4660	Mustang	26	14	27	25	4	21	25	6/5	5/2	18
6571	(Lee-Victoria) x Fulwin; Tex. 3770-7	28	17	27	31	4	21	28	4	1	22
6717	"	28	15	27	31	4	21	29	4	2	22
3923	DeSoto	28	17	25	30	4	22	28	5/27	4	21
1815	Appler	25	11 1/2	27	30	4/27	17	26	1	4	20
3392	Letoria	26	12 1/2	27	30	5/4	18	26	6/3	6	18
3955	Stanton 1	25	11 1/2	27	26	5/4	17	21	1	2	19
6731	Tenn. 090 x Bond; Tenn. Sel. 286-8	26	14 1/2	25	30	4	18	28	5/23	8	20
6732	"	28	11	30	6/1	8	18	29	6/5	6	20

1/ Average of one less replicate than other entries on this station.

2/ Average of station (5/20) substituted for missing data.

Table 67. Reactions to diseases on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat

Experiment grown in 1953-54. 1/

C. I. No.	Variety or Selection	Crown Rust										Stem Rust	
		Belle Mina, Ala.	Camden, Ala.	Taliessee, Ala.	Fayetteville, Ark.	Geinesville, Fla.	Jay, Fla.	Quincy, Fla.	Stoneville, Miss.	Hartsville, S. C.	College Station, Texas	Stoneville, Miss.	College Station, Texas
		o/o	o/o	o/o	o/o	o/o	o/o	o/o	o/o	o/o	o/o	o/o	o/o
3531	Fultex	R	R	R	10	T	S	S	5	R	5	2.8	15
6906	Victorgrain; Coker's 48-93 '54 Reg.	SS	SS	SS	2	T	I-S	I-S	15	R	5	4.8	30
6907	Santa Fe x (Stanton-Fulgrain); Coker's 53-13	SS	SS	SS	T	T	R-I	S	T	R	5	5.0	5
6908	(Arlington-Delair) x Trispermia; Coker's 53-29	SS	SS	SS	T	T-10	R	R-S	T	R	5	4.3	25
1815	Appler	SS	SS	SS	T	T	R	R-S	10	R	15	3.0	30
6588	Floriland; Fla. 167 x Landhafer	R	R	R	T	T-10	R	R	T	R	5	4.3	15
5207	Southland	R	R	SS	T	T-20	S	S	T	R	5	3.3	20
6600	Sunland; Fulghum (C.I. 708) x Landhafer	R	R	R	T	10	R-I	R-I	0	R	5	3.5	15
5924	Seminole; Appler x (Clinton ² - Santa Fe)	R	R	R	T	T-10	R	R-I	0	R	5	4.0	15
4653	Delair	R	R	R	T	T	S	S	45	CS	10	4.5	25
6666	(C.I. 4025 x C.I. 4383-C.I. 4189) x Landhafer	R	R	R	T	T	R	R-S	0	R	2	1.8	2
6574	"	SS	SS	SS	T	T	R	R-S	0	R	2	1.3	5
5873	C.I. 4019 x (Fulghum x Victoria)	SS	SS	SS	T	T	R	R-S	0	R	2	1.3	5
5371	Alamo; (Victa. x H-Banner) x (Fulghum-Victoria)	SS	SS	SS	T	T	R	I-S	0	R	2	1.0	5
6719	"	SS	SS	SS	T	T	R-I	S	10	IS	5	2.8	30
5372	(Red Rustproof x Victoria) x Norton	SS	SS	SS	T	T	R-S	I-S	5	CS	2	2.8	35
6729	Local check variety	SS	SS	SS	T	T	R	I-S	0	R	2	2.8	20
6729	Nortex x Trelle Dwarf; S.P.S.C. 41792	R	R	R	T	10	R	S	5	CS	2	2.3	10
5872	Nortex; Stoneville Ped. Seed Co. 0112	R	R	R	T	T	R	S	5	CS	5	3.3	10
6582	Trispermia x (Clinton ² - Santa Fe); Sel. 2819-3	SS	SS	SS	T	T	R-I	R-S	3	R	5	1.8	10
6605	Atlantic x (Clinton ² - Santa Fe); Sel. Row 229	SS	SS	SS	T	T	CS	S	0	R	5	3.8	8
6583	C.I. 4658 x (Clinton ² - Santa Fe); Sel. 506-1	SS	SS	SS	T	T	S	S	T	R	5	3.5	10
4657	Arlington	SS	SS	SS	T	T	S	I-S	T	R	5	2.8	10
4599	Atlantic	R	R	SS	T	10-20	CS	S	3	R	5	2.8	15
4660	Mustang	R	R	SS	T	10-20	CS	S	3	R	5	2.0	25
6571	(Lee-Victoria) x Fulwin; Tex. 3770-7	R	R	SS	T	T-10	S	CS	T	R	2	2.3	20
6717	" ; Tex. 3770-1	R	R	SS	T	10-20	S	S	T	R	5	4.0	15
3923	DeSoto	R	R	SS	T	T-10	S	I-S	T	R	5	3.3	30
1815	Appler	R	R	SS	T	T-10	S	R-S	10	CS	15	4.0	20
3392	Letoria	MS	MS	MS	T	T-10	S	S	T	R	5	3.5	30
3855	Stanton 1	R	R	SS	T	T	S	S	T	R	5	2.5	30
6731	Tenn. 090 x Bond; Tenn. Sel. 286-8	R	R	SS	T	T	S	S	T	R	5	2.5	30
6732	" ; Tenn. Sel. 313-2	SS	R	MS	T	20	S	S	75	CS	15	2.5	30

1/ S = Susceptible; SS = Slightly Susceptible; MS = Moderately Susceptible; R = Resistant; CS = Completely Susceptible; Highly Resistant;
 2/ Variable.
 3/ Prevalence of crown rust at College Station was 100 on all entries except T on 5371 and stem rust 100 on all entries except 40 on 6666 and 70 on 6583.

Table 68. Reactions to diseases on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat

Experiment grown in 1953-54. 1/

C. I. No.	Variety or Selection	Smut						Anthracnose			H. avenae			H. victorialis			Red Leaf			Type
		Belle Mina,	Camden,	Tallassee,	Ala. Calhoun,	Ala. Tallassee,	Flt. top,	Belle Mina,	Camden,	Ala. Tallassee,	Belle Mina,	Camden,	Ala. Tallassee,	Belle Mina,	Camden,	Ala. Tallassee,	Belle Mina,	Camden,	Ala. Tallassee,	
		MS	MS	MS	MS	MS	83	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	
3531	Fultex	MS	MS	MS	MS	MS	83	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
6906	Victorgrain; Coker's 48-93 '54 Reg.	MS	MS	MS	MS	MS	8	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
6907	Santa Fe x (Stanton-Fulghum); Coker's 53-13	MS	MS	MS	MS	MS	15	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
6908	(Arlington-Delair) x Trispermia; Coker's 53-29	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
1815	Appler	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
6588	Floriland; Fla. 167 x Landhafer	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
5207	Southland	MS	MS	MS	MS	MS	22	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
6600	Sunland; Fulghum (C.I. 708) x Landhafer	MS	MS	MS	MS	MS	33	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
5924	Seminole; Appler x (Clinton ² - Santa Fe)	MS	MS	MS	MS	MS	21	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
4653	Delair	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
6666	(C.I. 4025 x C.I. 4383-C.I. 4189) x Landhafer	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
6574	"	MS	MS	MS	MS	MS	22	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
5873	C. I. 4019 x (Fulghum x Victoria)	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
5371	Alamd; (Victoria x H. Banner) x (Fulghum-Victoria)	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
6719	"	MS	MS	MS	MS	MS	11	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	1
5372	(Red Rustproof x Victoria) x Norton	MS	MS	MS	MS	MS	17	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
---	Local check variety	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
6729	Nortex x Trelle Dwarf; S.P.S.C. 41792	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
5872	Nortex; Stoneville Ped. Seed Co. 0112	MS	MS	MS	MS	MS	9	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
6582	Trispermia x (Clinton ² - Santa Fe); Sel. 2819-3	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
6605	Atlantic x (Clinton ² - Santa Fe); Sel. Row 229	MS	MS	MS	MS	MS	12	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
6583	C.I. 4658 x (Clinton ² - Santa Fe); Sel. 506-1	MS	MS	MS	MS	MS	67	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
4657	Arlington	MS	MS	MS	MS	MS	38	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
4599	Atlantic	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
4660	Mustang	MS	MS	MS	MS	MS	89	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
6571	(Lee-Victoria) x Fulwin; Tex. 3770-7	MS	MS	MS	MS	MS	75	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
6717	" ; Tex. 3770-1	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
3923	DeSoto	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
1815	Appler	MS	MS	MS	MS	MS	66	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
3392	Letoria	MS	MS	MS	MS	MS	0	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
3855	Stanton 1	MS	MS	MS	MS	MS	92	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
6731	Tenn. 090 x Bond; Tenn. Sel. 286-8	MS	MS	MS	MS	MS	92	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
6732	" ; Tenn. Sel. 313-2	MS	MS	MS	MS	MS	57	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2
		MS	MS	MS	MS	MS	83	SS	SS	R	MS	MS	SS	SS	SS	SS	MS	MS	SS	2

1/ S = Susceptible; MS = Moderately Susceptible; VS = Very Susceptible; SS = Slightly Susceptible; R = Resistant.

Table 69. Reactions to diseases on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat

Experiment grown in 1953-54. 1/

C. I. No.	Variety or Selection	Kernel Blight			Halo Blight			Downy Mildew			Septoria			Virus Mosaic
		Belle Mina, Ala.	Tallassee, Ala.		Belle Mina, Ala.	Camden, Ala.	Tallassee, Ala.	Belle Mina, Ala.	Camden, Ala.	Tallassee, Ala.	Belle Mina, Ala.	Camden, Ala.	Tallassee, Ala.	
3531	Fultex	SS	R	SS	MS	R	SS	SS	R	SS	SS	SS	SS	50
6906	Victorgrain;Coker's 48-93 '54 Reg.	SS	R	SS	MS	SS	SS	SS	R	SS	R	SS	SS	10
6907	Santa Fe x (Stanton-Fulghum);Coker's 53-13	SS	R	SS	SS	MS	SS	SS	R	SS	SS	SS	SS	10
6908	(Arlington-Delair)x Trispermia;Coker's 53-29	SS	R	SS	SS	MS	SS	SS	R	SS	SS	SS	SS	100
1815	Appler	SS	SS	SS	MS	SS	MS	SS	SS	SS	SS	MS	MS	0
6588	Floriland;Fla. 167 x Landhafer	R	R	R	MS	R	MS	R	R	SS	R	SS	SS	0
5207	Southland	R	R	R	R	R	SS	R	R	SS	R	SS	SS	10
6600	Sunland;Fulghum(C.I.708) x Landhafer	R	R	R	R	R	MS	R	R	SS	R	MS	SS	50
5924	Seminole;Appler x (Clinton ₂ -Santa Fe)	SS	R	R	SS	R	SS	SS	SS	SS	R	MS	MS	90
4653	Delair	R	R	R	MS	R	SS	SS	R	SS	R	SS	SS	0
6666	(C.I.4025 x C.I.4383-C.I.4189)x Landhafer	SS	SS	SS	MS	MS	SS	SS	SS	SS	R	SS	SS	50
6574	"	R	SS	SS	SS	SS	SS	R	SS	SS	R	SS	SS	100
5873	C.I. 4019 x (Fulghum x Victoria)	R	R	R	R	R	R	R	R	R	R	R	R	50
5371	Alamo; (Vicia. x H-Benner)x(Fulghum-Victoria)	R	R	R	SS	MS	SS	SS	SS	SS	R	SS	R	40
6719	"	R	R	R	SS	R	R	SS	SS	R	R	SS	R	100
5372	(Red Rustproof x Victoria) x Norton	SS	R	R	SS	R	R	SS	SS	R	MS	SS	R	100
---	Local check variety	SS	R	R	SS	SS	SS	R	SS	SS	SS	SS	SS	0
6729	Nortex x Trelle Dwarf;S.P.S.C. 41792	SS	R	R	SS	SS	SS	R	SS	SS	SS	R	MS	0
5872	Nortex;Stoneville Ped. Seed Co. 0112	R	R	R	R	SS	SS	R	SS	SS	R	MS	MS	0
6582	Trispermia x(Clinton ₂ -Santa Fe);Sel. 2819-3	R	R	R	SS	R	SS	R	SS	SS	R	SS	SS	50
6605	Atlantic x(Clinton ₂ -Santa Fe);Sel. Row 229	SS	R	R	MS	MS	SS	R	SS	SS	R	SS	SS	0
6583	C.I.4658 x (Clinton ₂ -Santa Fe);Sel. 506-1	SS	R	R	SS	SS	MS	R	R	SS	SS	SS	SS	0
4657	Arlington	SS	R	R	SS	SS	SS	R	R	SS	SS	SS	SS	0
4599	Atlantic	SS	R	R	SS	SS	SS	R	R	SS	SS	SS	SS	0
4660	Mustang	R	R	R	SS	SS	MS	R	R	SS	R	SS	SS	100
6571	(Lee-Victoria)x Fulwin;Tex. 3770-7	R	R	R	SS	R	SS	R	R	SS	R	R	SS	100
6717	" " ;Tex. 3770-1	R	R	R	SS	R	SS	R	R	SS	R	R	SS	100
3923	DeSoto	R	R	R	SS	SS	SS	R	R	SS	R	SS	SS	0
1815	Appler	SS	R	R	SS	SS	MS	R	R	SS	MS	MS	MS	0
3392	Letoria	R	R	R	SS	SS	SS	R	R	SS	R	MS	SS	100
3855	Stanton 1	R	R	R	SS	SS	SS	R	R	SS	R	SS	SS	100
6731	Tenn. 090 x Bond;Tenn. Sel. 286-8	R	R	R	SS	SS	SS	R	R	SS	R	SS	SS	0
6732	" " ;Tenn. Sel. 313-2	R	R	R	SS	SS	SS	R	R	SS	R	SS	SS	0

1/ S = Susceptible; SS = Slightly Susceptible; MS = Moderately Susceptible; VS = Very Susceptible; R = Resistant; L = Light; M = Moderate; T = Trace.

Table 70 . Estimates of forage growth in the Fall on stations reporting of varieties and hybrid selections included in the Fall Sown

Oat Experiment grown in 1953-54.

(Percentages on forage growth based on Appler (check) equalling 100 o/o)

C. I. No.	Variety or Selection	Average Stations	Stuttgart, Ark. 1/	Quincy, Illa.	Experiment, Ga.	Filton, Ga.	College Station, Tex.	Denton, Tex.
					Percent			
3531	Fultex	109.8	2	108	110	104	121	106
6906	Victorgrain;Coker's 48-93 '54 Reg.	104.6	2	103	100	101	116	103
6907	Santa Fe x (Stanton-Fulgrain):Coker's 53-13	100.4	3	98	100	99	105	100
6908	(Arlington-Delair) x Trispermia;Coker's 53-29	109.2	3	114	110	105	111	106
1815	Appler (check)	100.0	2	100	100	100	100	100
6588	Floriland:Fla. 167 x Landhafer	108.8	2	114	105	108	116	101
5207	Southland	115.8	1	125	120	108	121	105
6600	Sunland:Fulghum(C.I.708) x Landhafer	114.6	1	119	120	107	116	111
5924	Seminole:Appler x(Clinton2 -Santa Fe)	113.0	1	121	120	109	116	99
4653	Delair	112.8	2	119	115	110	116	104
6666	(C.I.4025 x C.I.4383-C.I.4189) x Landhafer	108.6	1	109	105	105	116	108
6574	" "	104.8	2	101	105	101	116	101
5873	C.I.4019 x (Fulghum x Victoria)	107.6	2	110	110	100	116	102
5371	Alamo:(Victa. x H-Banner) x(Fulghum-Victoria)	111.0	1	110	110	106	121	108
6719	" "	107.4	2	110	110	100	111	106
5372	(Red Rustproof x Victoria) x Norton	100.6	2	100	95	101	105	102
6729	Local check variety	103.0	2	121	90	96	105	103
5872	Nortex x Trelle Dwarf:S.P.S.C. 41792	97.4	2	91	95	100	100	101
5872	Nortex:Stoneville Ped. Seed Co. 0112	96.6	2	90	95	99	100	99
6582	Trispermia x(Clinton2 -Santa Fe):Sel. 2819-3	102.2	2	105	105	100	105	96
6605	Atlantic x(Clinton2 -Santa Fe):Sel. Row 229	111.6	2	118	115	105	116	104
6583	C.I.4658 x (Clinton2 -Santa Fe):Sel. 506-1	107.2	2	103	110	104	116	103
4657	Arlington	107.2	3	109	110	106	111	100
4599	Atlantic	105.6	3	109	110	104	105	100
4660	Mustang	97.4	3	101	95	96	100	95
6571	(Lee-Victoria) x Fulwin:Tex. 3770-7	98.2	3	100	90	97	105	99
6717	" " :Tex. 3770-1	98.4	3	104	90	94	105	99
3923	DeSoto	104.2	2	109	100	101	105	106
1815	Appler (check)	100.0	2	100	100	100	100	100
3392	Letoria	102.6	3	104	100	99	111	99
3855	Stanton 1	103.0	2	105	100	100	111	99
6731	Tenn. 090 x Bond:Tenn. Sel. 286-8	97.8	2	100	90	98	100	101
6732	" " :Tenn. Sel. 313-2	97.6	3	99	90	99	100	100

1/ Not included in average.

Table 71 . Estimates of forage growth in the Spring on stations reporting of varieties and hybrid selections included in the Fall

Sown Oat Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average 13 Stations	Stuttgart, Ark.	Genesville, Fla.	Clay, Fla.	Quincy, Fla.	Thifton, Ga.	Crowley, La.	Beltsville, Md.	State College, Miss.	Stoneville, Miss.	Hartsville, S. C.	Yemassee, S. C.	College Station, Tex.	Warsaw, Va.
3531	Fultex	107.6	105	100	142	110	107	100	80	105	116	110	110	100	114
6906	Victorgrain;Coker's 48-93 '54 Reg.	104.1	107	105	118	106	106	90	84	105	116	110	105	95	106
6907	Santa Fe x (Stanton-Fulgrain):Coker's 53-13	104.2	110	110	118	101	102	90	90	95	110	110	110	105	104
6908	(Arlington-Delair)x Trispermia:Coker's 53-29	107.7	106	105	133	123	107	90	94	105	117	110	110	95	105
1815	Appler (check)	100.0	100	100	100	100	100	100	100	100	100	100	100	100	100
6588	Floriland:Fla. 167 x Landhafer	112.3	112	105	146	124	120	105	88	115	118	115	115	100	107
5207	Southland	117.5	118	115	168	133	116	105	84	120	122	115	120	95	117
6600	Sunland:Fulghum(C.I. 708) x Landhafer	115.4	117	115	168	129	126	105	75	110	111	110	115	105	114
5924	Seminole:Appler x (Clinton ² -Santa Fe)	113.2	115	110	175	130	121	100	58	115	107	120	115	95	110
4653	Delair	117.2	116	110	143	125	118	100	123	110	127	120	125	90	117
6666	(C.I. 4025 x C.I. 4383-C.I. 4189) x Landhafer	103.1	105	100	113	108	102	95	110	105	108	90	110	95	99
6574	" "	102.5	101	100	118	105	105	100	103	105	113	85	110	90	97
5873	C.I. 4019 x (Fulghum x Victoria)	106.2	100	105	125	114	106	100	95	115	116	100	105	95	105
5371	Alamo: (Vicia. x H-Banner)x(Fulghum-Victoria)	115.5	118	105	155	120	113	110	88	115	121	115	115	110	117
6719	" "	105.0	106	95	127	114	104	110	75	110	109	105	110	95	105
5372	(Red Rustproof x Victoria) x Norton	100.3	94	100	117	109	102	110	70	95	95	100	105	105	102
-----	Local check variety	108.6	112	105	143	123	100	100	85	110	110	110	115	95	104
6729	Nortex x Trelle Dwarf:S.P.S.C. 41792	98.1	94	95	100	90	100	100	85	100	104	100	100	105	102
5872	Nortex:Stoneville Ped. Seed Co. 0112	96.9	90	95	100	89	100	90	88	100	103	100	100	105	100
6582	Trispermia x(Clinton ² -Santa Fe):Sel. 2819-3	101.2	101	105	105	108	105	90	81	105	108	105	105	95	102
6605	Atlantic x(Clinton ² -Santa Fe):Sel. Row 229	112.2	112	105	133	125	108	100	85	105	125	115	130	100	116
6583	C.I. 4658 x (Clinton ² -Santa Fe):Sel. 506-1	104.2	101	100	110	105	100	110	94	105	115	105	110	95	105
4657	Arlington	107.2	108	100	123	113	104	110	91	105	115	110	105	105	105
4599	Atlantic	110.8	107	100	120	113	106	100	130	110	113	110	110	110	111
4660	Mustang	105.5	104	95	118	108	103	110	80	110	106	110	115	105	107
6571	(Lee-Victoria)x Fulwin:Tex. 3770-7	95.8	91	100	105	103	97	100	80	105	82	110	2/	86	85
6717	" " " :Tex. 3770-1	92.5	90	100	103	106	94	90	71	105	83	90	90	95	86
3923	DeSoto	106.3	110	95	123	116	104	90	89	110	118	115	110	95	107
1815	Appler (check)	100.0	100	100	100	100	100	100	100	100	100	100	100	100	100
3392	Letoria	102.5	97	95	120	108	104	95	105	110	115	100	90	90	104
3855	Stanton 1	102.6	99	95	112	108	102	90	123	105	108	100	95	86	89
6731	Tenn. 090 x Bond:Tenn. Sel. 286-8	94.8	88	110	100	100	92	95	115	100	78	95	85	100	102
6732	" " " :Tenn. Sel. 313-2	98.8	95	110	100	99	106	85	115	100	94	95	100	95	91

1/ Average of station (105) substituted for missing data.

2/ Average of station (107) substituted for missing data.

Table 72. Type of plant growth on stations reporting of varieties and hybrid selections included in the Uniform Fall Sown Oat

Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average Stations	Ark. Fayetteville,	Ark. Stuttgart,	Gainesville, Fla.	Quincy, Fla.	Tifton, Ga.	Crowley, La.	Beltsville, Md.	Stoneville, Miss.	Hartsville, S. C.	Summary
3531	Fultex	I-U	I	I	I	I	I	I	I	I	I	U
6906	Victorgrain; Coker's 48-93 '54 Reg.	D-I	I	I	I	I	I	I	I	I	I	U
6907	Santa Fe x (Stanton-Fulgrain); Coker's 53-13	D-I	I	I	I	I	I	I	I	I	I	U
6908	(Arlington-Delair) x Trispermia; Coker's 53-29	I	I	I	I	I	I	I	I	I	I	U
1815	Appler	D-I	I	I	I	I	I	I	I	I	I	U
6588	Floriland; Fla. 167 x Landhafer	I-U	I	I	I	I	I	I	I	I	I	U
5207	Southland	U	I	I	I	I	I	I	I	I	I	U
6600	Sunland; Fulghum (C.I. 708) x Landhafer	U	I	I	I	I	I	I	I	I	I	U
5924	Seminole; Appler x (Clinton ² - Santa Fe)	U	I	I	I	I	I	I	I	I	I	U
4653	Delair	U	I	I	I	I	I	I	I	I	I	U
6666	(C.I. 4025 x C.I. 4383-C.I. 4189) x Landhafer	D-I	I	I	I	I	I	I	I	I	I	U
6574	"	D-I	I	I	I	I	I	I	I	I	I	U
5873	C.I. 4019 x (Fulghum x Victoria)	I	I	I	I	I	I	I	I	I	I	U
5371	Alamo; (Victa. x B-Banner) x (Fulghum-Victoria)	I-U	I	I	I	I	I	I	I	I	I	U
6719	"	I	I	I	I	I	I	I	I	I	I	U
5372	(Red Rustproof x Victoria) x Norton	I	I	I	I	I	I	I	I	I	I	U
---	Local check variety	I	I	I	I	I	I	I	I	I	I	U
6729	Nortex x Trelle Dwarf; S.P.S.C. 41792	I	I	I	I	I	I	I	I	I	I	U
5872	Nortex; Stoneville Ped. Seed Co. 0112	D	I	I	I	I	I	I	I	I	I	U
6582	Trispermia x (Clinton ² - Santa Fe); Sel. 2819-3	I	I	I	I	I	I	I	I	I	I	U
6605	Atlantic x (Clinton ² - Santa Fe); Sel. Row 229	I	I	I	I	I	I	I	I	I	I	U
6583	C.I. 4658 x (Clinton ² - Santa Fe); Sel. 506-1	D-I	I	I	I	I	I	I	I	I	I	U
4657	Arlington	D-I	I	I	I	I	I	I	I	I	I	U
4599	Atlantic	D-I	I	I	I	I	I	I	I	I	I	U
4660	Mustang	D	I	I	I	I	I	I	I	I	I	U
6571	(Lee-Victoria) x Fulwin; Tex. 3770-7	D-I	I	I	I	I	I	I	I	I	I	U
6717	" ; Tex. 3770-1	D	I	I	I	I	I	I	I	I	I	U
3923	DeSoto	D-I	I	I	I	I	I	I	I	I	I	U
1815	Appler	D-I	I	I	I	I	I	I	I	I	I	U
3392	Letoria	D-I	I	I	I	I	I	I	I	I	I	U
3855	Stanton 1	D-I	I	I	I	I	I	I	I	I	I	U
6731	Term. 090 x Bond; Tenn. Sel. 286-6	D-I	I	I	I	I	I	I	I	I	I	U
6732	" ; Tenn. Sel. 313-2	D	I	I	I	I	I	I	I	I	I	U

1/ U = Upright; I = Intermediate; D = Decumbent
 2/ Average of station (I) substituted for missing data.

Florida-Gulf Coast Experiment

This experiment has now been conducted for four years. Like all other uniform nurseries, once started it continued to expand until seed was sent to some 18 points in eight states in 1954. This has resulted in difficulty in obtaining seed for supplying all cooperators. The area in which the nursery is grown overlaps that of the Uniform Fall Sown Nursery to the north, and if the two nurseries were combined it would eliminate some duplication and reduce the amount of nursery work on many stations.

In 1953-54 the Uniform Florida-Gulf Coast Experiment was seeded on a total of 16 stations in addition to stations on which the entries in this experiment were grown in observation or disease-testing nurseries. The points to which seed was sent for growing in yield nurseries were as follows:

Ala.	Camden Fairhope Headland Tallassee	Ga.	Thomasville Tifton
Ariz.	Tucson	La.	Baton Rouge Crowley
Fla.	Gainesville Jay Live Oak Quincy	Miss.	Poplarville State College Stoneville
		S. C.	Hartsville
		Tex.	College Station

The entries in this nursery also were grown at Beltsville, Md., and Aberdeen, Idaho, for observation and seed increase, and at Gainesville, Fla., Statesville, N. C., Experiment, Ga., and Yemassee, S. C., to observe disease reactions.

The nursery in 1953-54 included 23 entries. Most of the entries in this nursery are resistant to both stem and crown rust. Since both rusts are usually present in the region in which this nursery is grown, there is little point in including entries except for checks that lack resistance to either rust, as they usually are destroyed almost completely on one or more stations. As a result, more and more entries in this nursery have had such resistance. The data on entries in this nursery are included in Tables 73 to 85, inclusive.

Yield, Bushels per Acre

Yield data on this experiment were obtained from 13 points in 1954. However, too few replicates of each entry were grown on three stations in Alabama; and as a result, yields from those stations are not included in the average, which is for only 10 stations. On the average, yields from Stoneville, Miss., and College Station, Texas, exceeded those from other points; whereas the poorest yields were obtained at Quincy, Fla., and Crowley, La. Owing to various reasons, no yield data were obtained at Tucson, Ariz., Live Oak, Fla., Baton Rouge, La., and State College, Miss. The highest yielding entry in this nursery in 1954 was Floriland, which averaged 58.0 bushels per acre. Next to Floriland, Alamo, Vic-torgrain, and Seminole yielded best. The poorest yielding entries in the nursery were C. I. Nos. 6736, 6666, and 6921, which yielded only 40.9, 42.2, and 43.3 bushels per acre, respectively. Appler averaged 55.2 bushels per acre.

Winter Hardiness

Data on survival of the entries in this experiment were received from several stations; but as the winter was comparatively mild in the area where this experiment is grown, no section on hardiness is made in this report on this nursery.

Test Weight

Data on test weight were received from five stations. As usual, oats in this experiment did not test very high in 1954. Test weights at three of the five stations reporting were very low, some being 25.0 pounds or under. On the average, test weights at College Station, Tex., were good, however. The best average test weights were recorded for C. I. Nos. 6910, 6754, and 6757 and Alamo. All exceeded 32 pounds per bushel. The poorest test weights were recorded for C. I. 6666 and C. I. 6921, which averaged 26.4 and 26.9 pounds per bushel, respectively.

Plant Height

Data on plant height were received from eight stations. Oats grew very tall at Stoneville, Miss., and short at Quincy, Fla., and Headland, Ala. On the average, the tallest entries grown in 1954 were C. I. Nos. 6910, 5492, 6736, 6599 and Floriland. All averaged 40 inches tall or taller. The shortest entries were C. I. Nos. 6755 and 6908, which averaged 34.0 and 34.6 inches tall, respectively.

Standing Ability

Data on lodging were received from six stations. As data from Crowley were not recorded in percentages, averages shown are for five stations only. Lodging was severe at Stoneville and Tallassee and in a few entries at Headland and Camden. On the average, Seminole lodged most, 60.4 percent; and C. I. 6921, least, 19.0 percent.

Date Headed

Data on heading date were received from seven stations. Except at Stoneville, Miss., some entries headed in March and some in April at all stations. At Stoneville all entries headed in April. The earliest entry in the experiment was Seminole, which headed March 20; whereas the last to head was C. I. 6921, which headed April 13. Most entries headed just prior to or after April 1.

Date Ripe

Six stations reported data on date ripe. Oats ripened earliest at College Stations, Tex., and latest at Tallassee, Ala. On the average, the earliest entry was C. I. 6754, whereas the latest entry was C. I. 5492.

Disease Resistance

Data on the disease reaction on the entries from the Uniform Florida-Gulf Coast Experiment are rather extensive. Ten stations reported on the reaction of these entries to crown rust infection. The most uniformly resistant of all entries was C. I. 6744. This oat appeared more resistant to crown rust than even such varieties as Seminole, Sunland, and Floriland. Data on stem rust in these entries were received from five stations. C. I. 6666 was given an "SS" reaction at Fairhope; otherwise, it appeared the most resistant entry in the experiment. Smut was reported from five points; and four entries, Seminole, C. I. 6757, 6908, and 6744, were resistant at all. Some entries, notably C. I. 6740, apparently had smut at nearly all points.

Data on the more minor diseases include those on anthracnose received from four points in Alabama. C. I. 6740 and 6921 were indicated as being resistant at all points. Four reports were received on the reaction of the entries of this experiment to H. avenae. All entries included appeared to be susceptible, from the data received.

Data on infection by H. victoriae blight were received from four points in Alabama. These data would indicate that all the entries in this nursery were susceptible, a result that has not been substantiated by data from other points. As stated earlier in this report, it would seem that there may possibly be races of this disease, judged by the reports received from Alabama.

Five stations reported the reaction of these entries to mosaic or virus. According to data received from the four points in Alabama, all entries in this experiment were susceptible; whereas data from Hartsville, S. C., indicate many of them were not affected by this trouble. Here again is reason for concern, as in Alabama some new virus may be appearing.

Four reports were received on halo blight from Alabama. Several selections were resistant at two points and a few at three points, but none at all points reporting. Four reports on infection by downy mildew were received from Alabama. Only one entry, C. I. 6666, appeared to be resistant at all points. C. I. 5492 appeared to be resistant at three points. No other entries appeared to be resistant at more than two of the four points. Data on septoria were received from four points, and no entries in the experiment appeared to be resistant at more than two of the four. Kernel blight infection was reported on these entries at Headland, Ala. Ten of the entries appeared to be resistant, whereas all others were given a reading of "SS" or "MS".

Forage Value and Type of Growth

Data on forage rating of entries in this nursery in the fall were received from five stations and spring ratings from seven points. As the winters in this area are so mild, oats often grow throughout the winter; and it is difficult to state when fall data and spring data should be recorded.

The averages of all recordings indicate that C. I. 6922 produced more growth than any other entry, slightly exceeding Southland and C. I. Nos. 6754, 6910, and 6923, and Alamo. The least growth was recorded for C. I. 6936.

In the spring the most growth was recorded for Sunland, C. I. 6754 and C. I. 6910, although all entries except C. I. 6666 were given average ratings in excess of 100 percent (Appler check).

Data on growth type were received from six stations. As growth continues throughout the winter on most stations in this region, oats rarely grow as decumbent as they do farther north. As a result, Appler was the most decumbent of all entries, whereas C. I. 6754, Sunland, and C. I. 6757 were termed upright at all points reporting.

Table 73 . Entries included in the Uniform Florida-Gulf Coast Experiment grown in 1953-54.

C. I. No.	Variety or Hybrid	Selection	Seed Source 1/
1815	Appler (check)	Fla. XM4111-1-13	Check
5207	Southland (check)	Coker's Sel.	Fla.
5355	Victorgrain; Coker's 48-93 (check)	Tex. 73-44-90	S.C.
5371	Alamo: (Victoria x Hajira-Banner) x (Fulghum-Victoria)	Md. Sel.	Tex.
5492	Atlantic x (Clinton ₂ -Santa Fe)	Fla. Row 6514	Md.
5924	Seminole: Appler x (Clinton ₂ -Santa Fe)	Fla. Sel.	Fla.
6588	Floriland: Fla. 167 x Landhafer	Fla. 847-30-39	Fla.
6599	(Sac x Hajira-Joanette) x Fla. 167	Fla. 12506	Fla.
6600	Sunland: Fulghum 708 x Landhafer	Ida. Row 291	Fla.
6601	Trispermia x (Clinton ₂ -Santa Fe)	Md., Ida. Sel.	Fla.
6604	Atlantic x (Clinton ₂ -Santa Fe)	Ida. Row 269	Md.
6666	(Hajira-Joanette x C.I. 4383-C.I. 4189) x Landhafer	Md., Ida. Sel.	Md.
6736	Atlantic x (Clinton ₂ -Santa Fe)	Tex. 4129-3-37	Md.
6740	Wintok x (Clinton ₂ -Santa Fe)	Fla. 846-6-8 QR 1886	Tex.
6744	(Victoria x Hajira-Joanette) x (Fulghum-Victoria)	Fla. Sel. 49E-1-27 QR5694	Fla.
6754	Fla. 167 x (Santa Fe-Clinton)	Fla. XM0809-4 QR5330	Check
6755	(Trispermia x Cl. ₂ -S.F.) x (Atlant. x Cl. ₂ -S.F.)	Coker's 53-29	Coker's
6757	(Fla. 167 x Landhafer) x Southland	Md., Ida.	Md.
6908	(Arlington x Delair) x Trispermia	Ida. Ab. 201	Miss.
6910	Atlantic x (Clinton ₂ -Santa Fe)	Ida. Ab. 113	Fla.
6921	Letoria x (Clinton ₂ -Santa Fe)	Ida. Ab. 114	Fla.
6922	(Atlantic x Clinton ₂ -Santa Fe) x Hajira-Joanette		
6923	(Atlantic x Clinton ₂ -Santa Fe) x Hajira-Joanette		

1/ The U. S. D. A. and in certain cases additional states cooperated in the production of many of these oats.

Table 74 . Summary of data obtained on the Uniform Florida-Gulf Coast Experiment grown in 1953-54.

Rank in Yield	C. I. No.	Variety or Selection	Acre Yield (10 Sta) Bu.	Test Weight (5 Sta) Lbs.	Plant Height (8 Sta) Ins.	Lodg- ing (5 Sta) o/o	Date Head (7 Sta)	Date Ripe (6 Sta)	Forage Rating Fall (5 Sta) o/o	Forage Rating Spring (7 Sta) o/o
1	6588	Floriland	58.0	29.8	41.0	38.4	3/22	5/8	108.2	120.9
2	5371	Alema	57.7	32.3	35.0	37.8	29	9	111.0	126.1
3	5355	Victorgrain 48-93	57.1	31.7	36.9	25.0	4/2	9	100.2	108.3
4	5924	Seminole	57.0	30.5	37.6	60.4	3/20	7	109.2	127.0
5	6757	(Fla. 167 x Land.) x Southland	56.7	32.3	37.8	29.8	27	7	105.4	117.6
6	1815	Appler	55.2	27.2	38.3	57.3	4/8	11	100.0	100.0
7	6922	(Atl. x Cl2 -S.F.) x H-J	55.1	28.7	36.1	39.2	5	10	113.4	125.4
8	6908	(Arl. x Delair) x Trispernia	54.7	30.0	34.6	41.0	3/30	9	104.0	117.9
9	6601	Trispernia x (Cl2 -S.F.)	53.3	30.1	37.1	28.8	4/4	14	99.6	115.6
10	6740	Wintok x (Cl2 -S.F.)	53.1	30.2	36.3	24.4	4	9	98.2	109.4
11	6604	Atlantic x (Cl2 -Santa Fe)	52.8	30.9	39.8	31.2	5	13	105.6	114.0
12	5207	Southland (check)	52.6	28.8	39.5	31.0	1	8	112.6	124.1
13	6755	(Trisp. x Cl2 -S.F.) x (Atl. x Cl2 -S.F.)	51.9	31.4	34.0	52.8	3/29	9	101.0	111.6
14	6744	(Victa x H-J) x (Fulgum-Victa.)	50.6	31.1	35.8	28.4	4/2	7	108.6	112.6
15	6754	Fla. 167 x (Santa Fe-Clinton)	50.2	32.6	37.6	48.4	3/22	3	112.4	128.4
16	6600	Sunland	50.0	28.8	39.6	42.0	22	7	109.8	129.1
17	6923	(Atl. x Cl2 -S.F.) x H-J	49.7	28.3	38.8	32.0	4/7	12	111.2	120.3
18	6599	(Sac x Haj-Joan.) x Fla. 167	47.3	30.3	40.0	47.6	3/25	7	110.0	121.9
19	5492	Atlantic x (Cl2 -Santa Fe)	47.3	29.9	42.9	33.8	4/8	16	106.6	114.7
20	6910	"	46.5	32.5	43.6	29.0	1	10	111.0	128.1
21	6921	Letoria x (Cl2 -Santa Fe)	42.3	26.9	37.9	19.0	13	15	98.0	119.6
22	6666	(H-J x C.I. 433-C.I. 4189) x Land.	42.2	26.4	36.8	37.2	11	14	99.4	99.0
23	6736	Atlantic x (Cl2 -Santa Fe)	40.9	30.1	41.9	37.4	10	14	97.0	106.4

Table 75 . Yields on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment
grown in 1953-54.

C. I. No.	Variety or Selection	Average 10 Stations	Camden Ala. 1/	Fairhope, Ala. 1/	Headland, Ala. 1/	Tallapoosa, Ala.	Gainesville, Tla.	Uvalde, Tla.	Quincy, Tla.	Fulton, Ga.	Crowley, Tla.	Poplarville, Miss.	Stoneville, Miss.	Hartsville, S. C.	College Sta- tion, Tex.
5492	Atlantic x (Clinton ² - Santa Fe)	47.3	80.8	4.3	26.5	52.8	20.2	61.3	8.8	30.4	34.2	42.2	85.4	60.8	76.6
6604	" "	53.1	55.3	13.6	25.7	56.7	21.7	69.6	27.2	47.5	32.4	58.6	75.7	49.9	80.6
6736	" "	40.9	30.6	.9	32.5	49.9	18.7	48.6	5.0	30.6	17.0	26.3	88.8	62.9	61.4
6910	" "	46.5	35.7	4.3	18.1	57.3	24.5	63.8	12.6	49.8	29.2	31.2	76.2	57.4	63.0
5207	Southland (check)	52.6	25.5	6.0	53.7	55.3	43.0	3	22.0	64.1	35.2	42.1	74.7	55.3	70.4
5924	Seminole	57.0	24.7	28.9	12.1	56.7	56.2	57.2	47.0	67.5	35.6	42.1	78.6	57.6	71.9
6754	Fla. 167 x (Santa Fe-Clinton)	50.2	33.2	62.1	32.5	52.5	43.1	71.0	46.0	62.3	33.8	48.1	54.1	26.3	65.0
6740	Wintok x (Clinton ² - Santa Fe)	53.1	69.8	12.8	37.8	64.1	38.2	75.7	40.3	47.0	34.2	25.0	70.0	59.7	76.9
6921	Letoria x (Clinton ² - Santa Fe)	43.3	91.9	17.0	22.7	58.7	7.0	64.9	20.9	30.7	31.2	19.3	76.5	4	5
6600	Sunland	50.0	54.5	66.4	13.6	42.6	52.2	60.6	27.7	60.0	28.2	44.8	79.7	33.4	70.7
6588	Floriland	58.0	62.1	63.0	14.4	57.3	49.3	57.5	41.7	68.5	45.0	51.6	76.7	61.3	70.8
1815	Appler (check)	55.2	53.6	23.0	47.6	86.2	32.0	57.8	35.1	48.8	33.0	31.0	6	66.2	86.2
6757	(Fla. 167 x Landhafer) x Southland	56.7	59.6	44.3	21.9	53.1	40.3	69.2	39.0	68.4	34.6	53.0	74.2	66.7	68.8
6908	(Arlington x Delair) x Trispermia	54.7	40.8	17.9	41.6	43.4	34.0	68.6	55.1	67.5	36.8	52.0	77.9	36.0	76.0
6601	Trispermia x (Clinton ² - Santa Fe)	53.3	51.1	28.1	40.8	56.4	28.9	62.2	33.0	49.3	27.6	45.1	83.2	66.0	81.4
6755	(Trisp. x Cl. ² - S.F.) x (Atl. x Cl. ² - S.F.)	51.9	69.8	46.0	10.6	55.9	22.5	61.4	40.9	61.6	32.6	48.8	73.4	38.8	82.8
5371	Alamo	57.7	76.6	15.3	32.5	47.9	43.0	73.8	44.1	62.8	43.0	47.3	86.0	45.6	83.5
5355	Victorgrain	57.1	46.0	27.2	23.4	55.9	42.8	67.3	33.5	57.4	47.8	51.3	84.1	45.5	85.0
6599	(Sac x Hajira-Joanette) x Fla. 167	47.3	29.8	79.1	18.1	42.6	46.4	65.3	30.3	58.4	31.4	45.9	64.2	25.5	63.1
6744	(Vict. x Haj.-Joanette) x (Fulg.-Vict.)	50.6	95.3	23.8	54.4	46.7	34.5	70.2	44.3	47.5	48.4	39.6	77.3	15.2	82.0
6666	Haj.-Joanette x C.I. 4383-C.I. 4189) x Land.	42.2	54.5	17.9	24.2	53.3	23.4	48.9	15.5	33.7	36.6	37.9	52.4	29.5	91.0
6922	(Atlantic x Cl. ² - Santa Fe) x Haj.-Joanette	55.1	51.9	74.9	28.0	69.8	11.5	72.5	31.7	50.9	40.8	60.7	77.9	57.5	77.2
6923	" "	49.7	115.7	129.4	75.6	67.3	7.2	60.6	32.3	45.8	38.6	40.1	78.6	48.6	78.0

1/ Only one replicate grown, so not included in average.
2/ Average of station {32.7} substituted for missing data.
3/ Average of station {64.0} substituted for missing data.
4/ Average of station {48.4} substituted for missing data.
5/ Average of station {75.6} substituted for missing data.
6/ Average of station {75.7} substituted for missing data.

Table 76 . Test weights on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast

Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average Stations	Quincy, Fla.	Filton, Ga.	Stoneville, Miss.	Hartsville, S. C.	College Sta- tion, Tex.
Pounds							
5492	Atlantic x (Clinton ² - Santa Fe)	29.9	29.5	24.0	33.0	26.9	36.0
6604	"	30.9	29.5	28.5	32.0	31.7	33.0
6736	"	30.1	27.0	25.0	34.0	29.3	35.0
6910	"	32.5	31.0	32.0	34.0	28.6	37.0
5207	Southland (check)	28.8	25.0	28.5	30.0	29.4	31.0
5924	Seminole	30.5	30.0	28.0	32.0	27.6	35.0
6754	Fla. 167 x (Santa Fe-Clinton)	32.6	33.0	33.0	30.0	27.8	39.0
6740	Wintok x (Clinton ² - Santa Fe)	30.2	31.0	28.5	31.0	28.5	32.0
6921	Letoria x (Clinton ² - Santa Fe)	26.9	23.5	22.5	27.0	1/	2/
6600	Sunland	28.8	27.0	32.0	31.0	22.9	31.0
6588	Floriland	29.8	27.5	28.0	33.0	26.3	34.0
1815	Appler (check)	27.2	25.5	24.0	3/	24.3	31.0
6757	(Fla. 167 x Landhafer) x Southland	32.3	30.5	32.5	34.0	28.4	36.0
6908	(Arlington x Delair) x Trispermia	30.0	32.0	29.0	29.0	26.9	33.0
6601	Trispermia x (Clinton ² - Santa Fe)	30.1	32.0	28.0	31.0	32.2	31.0
6755	(Trisp. x Cl. ² - S.F.) x (Atl. x Cl. ² - S.F.)	31.4	30.0	32.0	30.0	28.9	36.0
5371	Alamo	32.3	32.5	32.0	34.0	28.8	34.0
5355	Victorgrain	31.7	33.0	28.5	32.0	28.8	36.0
6599	(Sac x Hajira-Joanette) x Fla. 167	30.3	28.5	30.5	31.0	25.6	36.0
6744	(Vict. x Haj.-Joanette) x Fulg.-Vict.)	31.1	32.0	30.5	32.0	1/	33.0
6666	(Haj.-Joanette x C.I. 4383-C.I. 4189) x Land.	26.4	25.0	23.5	25.0	26.3	32.0
6922	(Atlantic x Cl. ² - Santa Fe) x Haj.-Joanette	28.7	28.5	27.0	30.0	28.9	29.0
6923	"	28.3	27.5	25.0	28.0	29.2	32.0

1/ Average of station { 28.0 } substituted for missing data.
2/ Average of station { 33.7 } substituted for missing data.
3/ Average of station { 31.0 } substituted for missing data.

Table 77. Plant heights on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average Stations	Camden, Ala.	Headland, Ala.	Fallasse, Ala.	Gainesville, Fla.	Quincy, Fla.	Hilton, Ga.	Stoneville, Miss.	College Sta- tion, Tex.
Inches										
5492	Atlantic x (Clinton ² - Santa Fe)	42.9	48	34	43	48	33	44	54	39
6804	"	39.8	45	34	41	1/	37	38	49	34
6736	"	41.9	47	36	41	43	31	43	55	39
6910	"	43.6	48	34	41	49	41	45	55	36
5207	Southland (check)	39.5	45	32	41	47	31	39	49	32
5924	Seminole	37.6	46	30	38	37	32	38	45	35
6754	Fla. 167 x (Santa Fe-Clinton)	37.6	44	30	36	41	34	39	45	32
6740	Wintok x (Clinton ² - Santa Fe)	36.3	43	30	39	36	29	37	47	29
6921	Letoria x (Clinton ² - Santa Fe)	37.9	47	30	41	35	31	39	47	2/
6600	Sunland	39.6	44	30	35	48	36	42	52	30
6588	Floriland	41.0	48	30	39	46	38	42	52	33
1815	Appler (check)	38.3	48	30	39	40	31	37	3/	32
6757	(Fla. 167 x Landhafer) x Southland	37.8	43	30	37	41	32	38	50	31
6908	(Arlington x Delair) x Trispernia	34.6	40	30	34	37	27	34	44	31
6601	Trispernia x (Clinton ² - Santa Fe)	37.1	40	36	38	34	28	36	52	33
6755	(Trisp. x Cl. ² - S.F.) x (Atl. x Cl. ² - S.F.)	34.0	41	30	32	33	30	33	44	29
5371	Alamo	35.0	42	32	33	37	31	33	43	29
5355	Victorgrain	36.9	42	30	40	37	30	38	45	33
6599	(Sac x Hajira-Joanette) x Fla. 167	40.0	45	36	40	44	33	37	50	35
6744	(Vict. x Haj.-Joanette) x (Fulg.-Vict.)	35.8	43	36	35	38	26	35	45	28
6666	(Haj.-Joanette x C. I. 4383-C. I. 4189) x Land.	36.8	42	30	41	36	28	36	48	33
6922	(Atlantic x Cl. ² - Santa Fe) x Haj.-Joanette	36.1	43	30	36	34	27	38	48	33
6923	"	38.8	48	36	39	37	30	39	50	31

1/ Average of station {40} substituted for missing data.
 2/ Average of station {33} substituted for missing data.
 3/ Average of station {49} substituted for missing data.

Table 78 . Percent of lodging on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average Stations	Camden, Ala.	Headland, Ala.	Tallassee, Ala.	Jay, Fla.	Crowley, La. 1/	Stoneville, Miss.
								Percent
5492	Atlantic x(Clinton) ² - Santa Fe)	33.8	0	5.0	78.0	28.0		58.0
5604	"	31.2	10.0	10.0	78.0	0		58.0
6736	"	37.4	50.0	5.0	80.0	0	1	52.0
6910	"	29.0	20.0	10.0	50.0	0	1	65.0
5207	Southland (check)	31.0	5.0	10.0	50.0	2/	1	72.0
5924	Seminole	60.4	75.0	70.0	50.0	17.0	3	90.0
6754	Fla. 167 x (Santa Fe-Clinton)	48.4	95.0	20.0	42.0	0	1	85.0
6740	Wintok x(Clinton) ² - Santa Fe)	24.4	10.0	5.0	27.0	5.0	1	75.0
6921	Letoria x(Clinton) ² - Santa Fe)	19.0	0	10.0	15.0	28.0	1	42.0
6600	Sunland	42.0	50.0	20.0	45.0	0	2	95.0
6588	Floriland	38.4	50.0	20.0	60.0	10.0	1	52.0
1815	Appler (check)	57.3	100.0	20.0	50.0	50.0	4	3/
6757	(Fla. 167 x Landhafer) x Southland	29.8	10.0	15.0	37.0	0	1	87.0
6908	(Arlington x Delair) x Trispermia	41.0	40.0	10.0	43.0	30.0	1	82.0
6801	Trispermia x(Clinton) ² - Santa Fe)	28.8	15.0	15.0	32.0	0	1	82.0
6755	(Trisp. x Cl. - S.F.) x (Atl. x Cl.) ² - S.F.)	52.8	20.0	20.0	87.0	37.0	1	100.0
5371	Alamo	37.8	5.0	15.0	92.0	37.0	1	40.0
5365	Victorgrain	25.0	0	10.0	67.0	3.0	1	45.0
6599	(Sac x Hajira-Joanette) x Fla. 167	47.6	10.0	10.0	75.0	43.0	3	100.0
6744	(Vict. x Haj.-Joanette) x(Fulg.-Vict.)	28.4	5.0	5.0	88.0	22.0	1	22.0
6666	(Haj.-Joanette x C.I. 4383-C.I. 4189) x Land.	37.2	0	20.0	87.0	17.0	1	62.0
6922	(Atlantic x Cl.) ² - Santa Fe) x Haj.-Joanette	39.2	0	15.0	83.0	43.0	1	55.0
6923	"	32.0	0	10.0	77.0	25.0	1	48.0

1/ Lodging indicated by classes, not percent; not included in average.
2/ Average of station (18.0) substituted for missing data.
3/ Average of station (66.7) substituted for missing data.

Table 79 . Dates of heading on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average Stations	Ge- nesville, Fla.	Day, Fla.	Quincy, Fla.	Pitts- ton, Ga.	Crowley, La.	Stoneville, Miss.	College Sta- tion, Tex.
5492	Atlantic x (Clinton ² - Santa Fe)	4/8	3/22	4/9	4/10	4/12	3/30	4/24	4/18
6604	"	5	1/29	9	7	8	27	19	2
6736	"	10	15	11	12	14	4/1	23	7
6910	"	1	15	4	3	5	3/22	17	3/28
5207	Southland (check)	1	15	2/28	4	6	17	20	30
5924	Seminole	3/20	2/19	3/28	3/21	3/25	12	13	20
6754	Fla. 167 x (Santa Fe-Clinton)	22	3/10	3/30	28	30	2/20	15	18
6740	Wintok x (Clinton ² - Santa Fe)	4/4	22	4/6	4/6	4/8	3/25	23	28
6921	Letoria x (Clinton ² - Santa Fe)	13	4/8	13	15	16	4/1	30	4/6
6600	Sunland	3/22	2/28	3/26	3/26	3/27	3/5	14	3/20
6588	Floriland	22	3/10	28	24	28	5	12	20
1815	Appler (check)	4/8	4/2	4/11	4/10	4/11	26	3/15	4/5
6757	(Fla. 167 x Landhafer) x Southland	3/27	3/15	1	3/30	3/29	15	15	3/20
6908	(Arlington x Delair) x Trispermia	3/30	15	2	29	4/2	20	20	28
6601	Trispermia x (Clinton ² - Santa Fe)	4/4	15	7	4/6	9	27	24	4/1
6755	(Trisp. x Cl. ² - S.F.) x (Atl. x Cl. ² - S.F.)	3/29	15	3	1	1	20	13	3/26
5371	Alamo	29	10	3	3/31	5	15	14	26
5355	Victorgrain	4/2	22	6	4/6	5	20	18	27
6599	(Sac x Hajira-Joanette) x Fla. 167	3/25	15	2	3/31	8	2/20	14	19
6744	(Vict. x Haj.-Joanette) x (Fulg.-Vict.)	4/2	22	4	4/5	9	3/20	17	29
6666	(Haj.-Joanette x C.I. 4383-C.I. 4189) x Land.	11	4/6	12	14	14	2/29	27	4/4
6922	(Atlantic x Cl. ² - Santa Fe) x Haj.-Joanette	5	3/29	6	6	9	22	22	1
6923	"	7	29	8	9	7	24	25	7

1/ Average of station (3/19) substituted for missing data.
2/ Average of station (4/5) substituted for missing data.
3/ Average of station (4/20) substituted for missing data.

Table 80 . Dates of ripening on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast

Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average Stations	Ala. Fairhope,	Ala. Tallahassee,	La. Crowley,	Miss. Poplarville,	Miss. Stoneville,	College Sta- tion, Tex.
5492	Atlantic x (Clinton ² -Santa Fe)	5/16	5/10	5/28	5/8	5/14	5/28	5/5
6604	"	13	1	28	8	14	23	1
6736	"	14	1	28	8	14	27	5
6910	"	10	5	26	4	7	22	4/26
5207	Southland (check)	8	5	24	4/27	4/30	22	30
5924	Seminole	7	5	26	27	30	20	25
6754	Fla. 167 x (Santa Fe-Clinton)	3	5	24	27	30	20	2
6740	Wintok x (Clinton ² -Santa Fe)	9	5	30	27	30	20	2
6921	Letoria x (Clinton ² -Santa Fe)	15	7	30	27	30	25	2
6600	Sunland	7	7	30	5/8	5/7	6/1	28
6588	Floriland	8	7	26	4/27	4/30	5/20	5/4
1815	Appler (check)	11	7	28	27	30	20	4/25
6757	(Fla. 167 x Landhafer) x Southland	7	7	26	5/4	30	1/	26
6908	(Arlington x Delair) x Trispermia	9	7	24	4/27	30	22	5/4
6601	Trispermia x (Clinton ² -Santa Fe)	14	7	28	27	30	27	4/23
6755	(Trisp. x Cl. ² -S.F.) x (Atl. x Cl. ² -S.F.)	9	7	22	5/4	5/14	27	30
5371	Alamo	9	7	22	4/27	7	20	5/2
5355	Victorgrain	9	7	22	27	7	20	4/28
6599	(Sac x Hajira-Joanette) x Fla. 167	7	7	26	27	4/30	22	28
6744	(Vict. x Haj.-Joanette) x (Fulg.-Vict.)	7	1	26	27	30	20	30
6666	Haj.-Joanette x C.I. 4383-C.I. 4189) x Land.	14	10	24	27	30	20	24
6922	Atlantic x Cl. ² -Santa Fe) x Haj.-Joanette	10	10	26	27	5/14	29	30
6923	"	12	12	26	27	4/30	26	5/4
				26	27	5/7	26	1
								3

1/ Average of station (5/24) substituted for missing data.
2/ Possibly this entry was ripened prematurely by stem rust.

Table 81. Reactions to diseases on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1953-54.^{1/}

C. I. No.	Variety or Selection	Crown Rust										Stem Rust								
		Camden, Ala.	Headland, Ala.	Fairhope, Ala.	Tallassee, Ala.	Genevieve, Fla.	Fla. Type	Fla.	Day, Fla.	Quincy, Fla.	Stonewille, Miss.	Hartsville, S. C.	College Station, Texas	Camden, Ala.	Headland, Ala.	Fairhope, Ala.	Tallassee, Ala.	College Station, Texas	Prev o/o Reac	
5492	Atlantic x (Clinton ₂ - Santa Fe)	R	MS	S	R	T-20	0-3	S	S	S	0	T	100	R	R	R	R	100	15	S
6604	"	SS	MS	S	SS	T-10	0-2	S	S	S	1-T	T	100	R	R	R	R	100	15	S
6736	"	SS	SS	SS	SS	T	0-1	S	S	S	1-5	5	100	R	R	R	R	100	30	S
6910	"	SS	SS	S	SS	T	0	S	S	S	1-5	2	100	R	R	R	R	100	30	S
5207	Southland (check)	SS	SS	S	SS	T	2-4	-	-	-	1-5	2	100	R	R	R	R	100	20	S
5924	Seminole	SS	SS	MS	R	T	0-1	R	R	R	0	T	100	R	R	R	R	100	15	S
6754	Fla. 167 x (Santa Fe-Clinton)	SS	R	MS	R	T-10	0-1	R-S	R-S	I-S	0	T	100	R	R	R	R	100	20	S
6740	Wintok x (Clinton ₂ - Santa Fe)	SS	R	MS	R	T	0-1	R	R	R	0	0	100	R	R	R	R	100	30	S
6921	Letoria x (Clinton ₂ - Santa Fe)	R	R	MS	R	T	0-1	R	R	R	0	0	100	R	R	R	R	100	35	S
6600	Sunland	SS	R	MS	R	T	0-2	R	R	R	0	0	100	R	R	R	R	100	15	S
6588	Floriland	SS	R	MS	R	T	0-1	R	R	R	0	0	100	R	R	R	R	100	15	S
1815	Appler (check)	SS	SS	MS	R	T	0	R	R	R	0	T	100	R	R	R	R	100	30	S
6757	(Fla. 167 x Landhafer) x Southland	SS	SS	MS	MS	T	0	R	R	R	1-T	0	100	R	R	R	R	100	10	S
6908	(Arlington x Delair) x Trispermia	SS	R	MS	R	T	0	R	R	R	1-T	0	100	R	R	R	R	100	15	S
6601	Trispermia x (Clinton ₂ - Santa Fe)	SS	SS	MS	R	T	0	R	R	R	-	0	100	R	R	R	R	100	20	S
6755	(Trisp. x Cl. ₂ - S.F.) x (Atl. x Cl. ₂ - S.F.)	SS	R	MS	R	T-10	0	R-S	R-S	R-S	0	T	100	R	R	R	R	100	10	S
5371	Alamo	R	R	MS	R	10	0	S	S	S	0	2	T	R	R	R	R	100	5	R
5355	Victorgrain	R	R	S	R	0	0	R-I	R-I	S	1-T	2	100	R	R	R	R	100	30	S
6599	(Sac x Hajira-Joanette) x Fla. 167	SS	R	S	R	T-10	0	R	R	R	0	T	100	R	R	R	R	100	10	S
6744	(Vict. x Haj. Joanette) x (Fulg.-Vict.)	R	R	MS	R	T-10	0-1	R-S	R-S	R	0	T	T	100	R	R	R	100	5	R
6666	Haj.-Joanette x C.I. 4383-C.I. 4189	R	R	SS	R	T	0	R	R	R-I	0	0	100	R	R	R	R	40	2	R
6922	(Atlantic x Cl. ₂ - Santa Fe) x Haj.-Joanette	SS	SS	SS	R	T	0-1	R	R	R-S	0	T	100	R	R	R	R	100	5	R
6923	"	R	SS	MS	R	T	0	R	R	R-S	0	T	100	R	R	R	R	100	5	R

^{1/} S = Susceptible; MS = Moderately Susceptible; VS = Very Susceptible; SS = Slightly Susceptible; R = Resistant; T = Trace.

Table 82. Reactions to diseases on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1953-54. 1/

C. I. No.	Variety or Selection	Smut						Anthracnose				H. avenae				H. victoriae			
		Camden, Ala. 2/	Headland, Ala. 2/	Hairhope, Ala. 2/	Tallassee, Ala.	Titon, Ala.	Clinton Coker's 3/	Camden, Ala.	Headland, Ala.	Hairhope, Ala.	Tallassee, Ala.	Camden, Ala.	Headland, Ala.	Hairhope, Ala.	Tallassee, Ala.	Camden, Ala.	Headland, Ala.	Hairhope, Ala.	Tallassee, Ala.
5492	Atlantic x (Clinton ₂ - Santa Fe)	MS	R	R	R	R	55	R	R	R	R	MS	SS	SS	SS	R	SS	SS	SS
6604	"	R	R	R	R	R	77	SS	SS	SS	SS	MS	MS	MS	MS	R	SS	MS	SS
6736	"	SS	R	R	R	R	55	R	R	R	R	SS	SS	SS	SS	SS	SS	S	SS
6910	"	R	R	R	R	R	93	R	R	R	R	MS	MS	MS	MS	SS	SS	MS	SS
5207	Southland (check)	R	R	R	R	R	0	R	R	R	R	SS	SS	SS	SS	SS	SS	MS	SS
5924	Seminole	R	R	R	R	R	33	R	R	R	R	SS	SS	SS	SS	R	SS	MS	SS
6754	Fla. 167 x (Santa Fe-Clinton)	SS	SS	SS	SS	SS	86	SS	SS	SS	SS	MS	MS	MS	MS	SS	SS	MS	SS
6740	Wintok x (Clinton ₂ - Santa Fe)	R	R	R	R	R	27	R	R	R	R	MS	MS	MS	MS	SS	SS	S	SS
6921	Lectoria x (Clinton ₂ - Santa Fe)	R	R	R	R	R	40	R	R	R	R	SS	SS	SS	SS	SS	SS	MS	SS
6600	Sunland	R	R	R	R	R	66	SS	SS	SS	SS	S	MS	MS	MS	SS	SS	MS	SS
6588	Floriland	R	R	R	R	R	10	SS	SS	SS	SS	S	MS	MS	MS	SS	SS	MS	SS
1815	Appler (check)	R	R	R	R	R	0	SS	SS	SS	SS	S	MS	MS	MS	SS	SS	MS	SS
6757	(Fla. 167 x Landhafer) x Southland	R	R	R	R	R	0	SS	SS	SS	SS	S	MS	MS	MS	SS	SS	MS	SS
6908	(Arlington x Delair) x Trispermia	R	R	R	R	R	0	SS	SS	SS	SS	S	MS	MS	MS	SS	SS	MS	SS
6601	Trispermia x (Clinton ₂ - Santa Fe)	R	R	R	R	R	86	SS	SS	SS	SS	MS	MS	MS	MS	SS	SS	MS	SS
6755	(Trisp. x Cl. 2 - S.F.) x (Atl. x Cl. 2 - S.F.)	R	R	R	R	R	31	SS	SS	SS	SS	S	MS	MS	MS	SS	SS	S	SS
5371	Alema	R	R	R	R	R	80	SS	SS	SS	SS	MS	MS	MS	MS	SS	SS	S	SS
5355	Victorgrain	R	R	R	R	R	17	SS	SS	SS	SS	S	MS	MS	MS	SS	SS	S	SS
6599	(Sac x Hajira-Joanette) x Fla. 167	R	R	R	R	R	14	SS	SS	SS	SS	S	MS	MS	MS	SS	SS	S	SS
6744	(Vict. x Haj. -Joanette) x (Fulg. -Vict.)	R	R	R	R	R	0	SS	SS	SS	SS	S	MS	MS	MS	SS	SS	MS	SS
6666	Haj.-Joanette x C.I. 4383-C.I. 4189	R	R	R	R	R	0	SS	SS	SS	SS	S	MS	MS	MS	SS	SS	MS	SS
6922	(Atlantic x Cl. 2 - Santa Fe) x Haj. -Joanette	R	R	R	R	R	67	SS	SS	SS	SS	MS	MS	MS	MS	SS	SS	MS	SS
6923	"	R	R	R	R	R	34	SS	SS	SS	SS	MS	MS	MS	MS	R	SS	MS	SS

1/ S = Susceptible; SS = Slightly Susceptible; MS = Moderately Susceptible; R = Resistant.
 2/ All entries very resistant to covered smut.
 3/ Loose smut, three races.

Table 25. Reactions to diseases on stations reporting of varieties and hybrid selections included in the Uniform Florida Citrus Caus

Experiment grown in 1953-54.1/

C. I. No.	Variety or Selection	Mosaic					Halo Blight				Downy Mildew				Septoria				Kernel Blight
		Camden, Ala.	Headland, Ala.	Featherhope, Ala.	Tallassee, Ala.	Huntsville, S. C.	Camden, Ala.	Headland, Ala.	Featherhope, Ala.	Tallassee, Ala.	Camden, Ala.	Headland, Ala.	Featherhope, Ala.	Tallassee, Ala.	Camden, Ala.	Headland, Ala.	Featherhope, Ala.	Tallassee, Ala.	
5492	Atlantic x (Clinton ² - Santa Fe)	SS	R	MS	SS	O	SS	R	SS	SS	SS	R	R	R	SS	SS	MS	SS	Headland, Ala.
6604	"	MS	SS	MS	MS	O	SS	R	SS	MS	SS	R	SS	SS	SS	SS	MS	SS	
6735	"	SS	SS	MS	MS	O	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	
6910	"	S	SS	MS	SS	O	SS	SS	SS	SS	R	R	SS	R	SS	R	R	R	
5207	Southland (check)	S	SS	MS	MS	O	SS	SS	SS	SS	SS	SS	SS	R	SS	SS	SS	SS	
5924	Seminole	S	MS	MS	MS	O	SS	SS	SS	MS	SS	SS	SS	SS	SS	SS	SS	SS	
6754	Fla. 167 x (Santa Fe-Canton)	S	MS	MS	MS	M	SS	SS	SS	SS	R	SS	SS	SS	SS	SS	SS	SS	
6740	Wintok x (Clinton ² - Santa Fe)	MS	SS	S	MS	O	SS	R	R	MS	SS	SS	R	SS	SS	SS	SS	R	
6921	Letoria x (Clinton ² - Santa Fe)	MS	R	S	MS	L	SS	R	R	MS	SS	R	R	SS	SS	R	SS	R	
6600	Sunland	MS	MS	MS	SS	O	SS	SS	R	SS	SS	SS	SS	R	SS	SS	SS	SS	
6588	Floriland	MS	MS	MS	MS	O	SS	SS	R	MS	R	SS	SS	R	SS	SS	SS	SS	
1815	Appler (check)	MS	SS	MS	MS	O	SS	SS	SS	MS	SS	SS	SS	SS	SS	SS	SS	SS	
6757	(Fla. 167 x Landhafer) x Southland	S	MS	MS	MS	O	SS	SS	SS	MS	R	SS	SS	SS	SS	SS	SS	SS	
6908	(Arlington x Delair) x Trispermia	MS	MS	MS	S	L	SS	SS	SS	MS	SS	SS	SS	SS	SS	SS	SS	S	
6601	Trispermia x (Clinton ² - Santa Fe)	MS	MS	MS	S	O	SS	SS	SS	MS	SS	SS	SS	R	SS	SS	SS	SS	
6755	(Trisp. x Cl. ² - S.F.) x (Atl. x Cl. ² - S.F.)	S	MS	MS	SS	L	SS	SS	SS	SS	SS	SS	SS	R	SS	SS	SS	R	
5371	Alamo	MS	SS	S	MS	M	SS	R	SS	MS	SS	R	SS	SS	MS	SS	MS	R	
5355	Victorgrain	MS	MS	MS	MS	O	SS	R	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	
6599	(Sac x Hajira-Joanette) x Fla. 167	MS	S	MS	SS	L	SS	R	SS	SS	SS	SS	SS	R	SS	SS	SS	SS	
6744	(Vict. x Haj. -Joanette) x (Fulg.-Vict.)	MS	SS	MS	MS	VS	SS	R	SS	MS	SS	SS	SS	SS	MS	SS	SS	MS	
6666	(Haj.-Joanette x C.I. 4383-C.I. 4189) x Land.	MS	MS	S	MS	S	SS	SS	SS	SS	SS	R	R	R	SS	SS	SS	SS	
6922	(Atlantic x Cl. ² - Santa Fe) x Haj. -Joanette	MS	MS	S	MS	O	SS	SS	SS	SS	R	SS	R	SS	SS	SS	SS	SS	
6923	"	MS	MS	MS	MS	M	SS	R	R	MS	R	SS	R	SS	SS	SS	SS	SS	

1/ S = Susceptible; SS = Slightly Susceptible; MS = Moderately Susceptible; VS = Very Susceptible; R = Resistant.
 2/ M = Moderate; VS = Very Severe; L = Light.

Table 84 . Estimates of forage growth in the Spring and Fall on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1953-54.

(Percentages on forage growth based on Applier (check) equalling 100 o/o.)

C. I. No.	Variety or Selection	Fall						Spring							
		Average of Stations	Gainesville, Fla.	Quincy, Fla.	Tifton, Ga.	Crowley, La.	College Sta- tion, Tex.	Average of Stations	Clay, Fla.	Quincy, Fla.	Tifton, Ga.	Stoneville, Miss.	Hartsville, S. C.	Yemassee, S. C.	College Sta- tion, Tex.
5492	Atlantic x (Clinton ² -Santa Fe)	106.6	110	105	102	100	116	114.7	148	114	105	116	115	110	95
6604	"	105.6	111	111	101	100	111	114.0	135	116	105	122	115	100	105
6736	"	97.0	100	109	106	70	100	106.4	113	109	104	118	115	100	86
6910	"	111.0	105	125	109	100	116	128.1	175	130	118	119	125	125	105
5207	Southland (check)	112.8	110	124	109	100	121	124.1	2/	130	117	124	125	120	95
5924	Seminole	109.2	105	119	106	100	116	127.0	177	125	117	120	125	120	105
6754	Fla. 167 x (Santa Fe-Clinton)	112.4	105	124	107	100	126	128.4	180	133	118	128	120	125	95
6740	Wintok x (Clinton ² -Santa Fe)	98.2	100	110	105	65	111	108.4	118	111	108	112	115	100	95
6921	Letoria x (Clinton ² -Santa Fe)	98.0	95	111	104	75	105	119.6	177	116	106	118	3/	4/	95
6600	Sunland	109.8	110	118	105	100	116	129.1	183	124	120	122	125	125	105
6588	Floriland	108.2	105	115	105	100	116	120.9	175	123	114	114	115	115	90
1815	Appler (check)	100.0	100	100	100	100	100	100.0	100	100	100	100	100	100	100
6757	(Fla. 167 x Landhafer) x Southland	105.4	105	115	106	85	116	117.6	138	123	116	125	115	120	86
6908	(Arlington x Delair) x Trispermia	104.0	105	113	106	85	111	117.9	157	120	110	118	115	110	95
6601	Trispermia x (Clinton ² -Santa Fe)	99.6	105	104	99	85	105	115.6	173	111	104	116	110	100	95
6755	(Trisp. x Cl. 2 -S.F.) x (Atl. x Cl. 2 -S.F.)	101.0	100	104	100	85	116	111.6	122	115	106	118	110	110	100
5371	Alamo	111.0	110	119	105	100	121	126.1	175	124	109	120	125	120	110
5355	Victorgrain	100.2	105	98	102	80	116	108.3	117	105	106	115	110	110	95
6599	(Sac x Hajira-Joanette) x Fla. 167	110.0	105	116	103	105	121	121.9	167	126	111	119	115	120	95
6744	(Vict. x Haj.-Joanette) x (Fulg.-Vict.)	108.6	105	113	104	100	121	112.6	157	119	104	118	85	105	100
6666	(Haj.-Joanette x C.I. 4383-C.I. 4189) x Land.	99.4	100	101	100	80	116	99.0	117	103	98	100	90	90	95
6922	(Atlantic x Cl. 2 -Santa Fe) x Haj.-Joanette	113.4	115	123	108	100	121	125.4	193	124	110	121	125	110	95
6923	"	111.2	110	121	104	100	121	120.3	175	124	108	115	115	110	95

1/ Average of station (105) substituted for missing data.
2/ Average of station (153) substituted for missing data.
3/ Average of station (114) substituted for missing data.
4/ Average of station (111) substituted for missing data.

Table 85 . Type of plant growth on stations reporting of varieties and hybrid selections included in the Uniform Florida-Gulf Coast Experiment grown in 1953-54.

C. I. No.	Variety or Selection	Average 6 Stations	Gainesville, Fla.	Jay, Fla.	Quincy, Fla.	Pifton, Ga.	Stoneville, Miss.	Hartsville, S. C.	D I U S u m m a r y I U
5492	Atlantic x (Clinton ² - Santa Fe)	I-U	U	I	I-U	D-I	I	U	2
6604	"	I	2/	I	I-U	D-I	I	U	1
6736	"	I	I	I-U	I-U	D-I	I	U	1
6910	"	I-U	U	U	U	I	I-U	U	4
5207	Southland (check)	U	U	U	U	U	U	U	5
5924	Seminole	U	U	U	U	U	U	U	5
6754	Fla. 167 x (Santa Fe-Canton)	U	U	U	U	U	U	U	6
6740	Wintok x (Clinton ² - Santa Fe)	D-I	I	D-I	D-I	D	I	U	1
6921	Letoria x (Clinton ² - Santa Fe)	I	I	I-U	I-U	D	I	U	0
6600	Sunland	U	U	U	U	U	U	U	3
6588	Floriland	I-U	U	U	U	U	U	U	5
1815	Appler (check)	D	I	I	I	I	I	U	6
6757	(Fla. 167 x Landhefer) x Southland	U	U	U	U	U	U	U	1
6908	(Arlington x Delair) x Trispermia	I	U	U	U	U	U	U	0
6601	Trispermia x (Clinton ² - Santa Fe)	I	U	U	U	U	U	U	6
6755	(Trisp. x Cl. ² - S.F.) x (Atl. x Cl. ² - S.F.)	I-U	U	U	U	U	U	U	2
5371	Alamo	U	U	U	U	U	U	U	0
5355	Victorgrain	D-I	U	U	U	U	U	U	5
6599	(Sac x Hajira-Joanette) x Fla. 167	U	I	D-I	U	U	U	U	0
6744	(Vict. x Haj.-Joanette) x (Fulg.-Vict.)	I-U	U	U	U	U	U	U	6
6666	(Haj.-Joanette x C.I. 4383-C.I. 4189) x Land.	D-I	U	U	U	U	U	U	1
6922	(Atlantic x Cl. ² - Santa Fe) x Haj.-Joanette	U	U	U	U	U	U	U	3
6923	"	U	U	U	U	U	U	U	0

1/ D = Decumbent; I = Intermediate; U = Upright.
 2/ Average of station (I-U) substituted for missing data.
 3/ Average of station (I-U) substituted for missing data.
 4/ Average of station (I-U) substituted for missing data.
 5/ Average of station (I) substituted for missing data.

UNIFORM WINTER HARDINESS OAT NURSERY

The Winter Hardiness Nursery was seeded on 40 stations in the fall of 1953. Although winterkilling in 1953-54 was much more extensive than in 1952-53, reports received indicated entries were killed on only two stations; whereas all survived on 15 stations. Only 23 of the 40 cooperating stations reported killing of a differential nature. According to survival data received in 1953-54, the most hardy entries were, in order, Ballard Selection from Kentucky (C.I. 6905), Wintok (C.I. 3424), and Fulwin (C.I. 3168), which survived 81.0, 80.7, and 80.6 percent, respectively. New York Selection, which survived best in 1952-53, had a survival of 76.5 percent in 1953-54. Among new entries, Cimarron (C.I. 5106) survived 73.5, and Dubois, 78.3 percent. The three sister strains to Mustang, C.I. No's 6571, 6717, and 6901, survived 75.8, 75.0, and 74.5, respectively. Another new entry, the "Stanton Strain", C.I. 6902, from Oklahoma ranked high in hardiness, averaging 79.0 percent.

Among new disease-resistant strains, C.I. 6740: Wintok x (Clinton² -Santa Fe) survived 58.7 percent; C.I. 6736: Atlantic x (Clinton² -Santa Fe), 56.4 percent; C.I. 6907: Santa Fe x (Stanton-Fulgrain), 58.2 percent; C.I. 6719: (Victoria x Hajira-Banner) x (Fulghum-Victoria), 44.0 percent; and C.I. 6908: (Arlington-Delair) x Trispermia, 43.6 percent.

Table 86. Summary Data on Survival of Oats Included in the Uniform Winter Hardiness Nursery Grown in 1953-1954. 1/

C. I. No.	Variety or Selection	Average (23 Sta.)
3424	Wintok	80.7
5106	Woodward Selection	73.5
2505	Hairy Culberson	74.2
5368	Clinton x Hairy Culberson;Purdue 407-25-6	77.9
6740	Wintok x (Clinton ² -Santa Fe)	58.7
5364	New York Selection	76.5
3296	Winter Turf (check)	62.7
3168	Fulwin	80.6
2499	Pentagon; Winter Fulghum	77.6
6571	(Lee-Victoria) x Fulwin;Tex. 3770-7	75.8
6717	" " " ;Tex. 3770-1	75.0
6901	" " " ;Tex. 3770-27	74.5
6572	Dubois;Clinton x Forkeddeer	78.3
6727	Clinton x Forkeddeer;Purdue 4011-14-4-3	75.9
6728	" " " ;Purdue 4011-5-3-1-3	77.3
5573	(Fulwin x Lee-Victoria) x Termex	75.4
5850	Arkwin; Tenn. 1922 x (Bond-Logold)	67.3
2042	Lee	62.9
6903	Lee x (Victoria-Forkeddeer);Purdue 392A2-13-1-2-1	78.7
6904	" " " ;Purdue 392A2-28-5	71.0
6902	Stanton Strain; Okla. 512336	79.0
6719	(Victoria x Hajira-Banner) x (Fulghum-Victoria)	44.0
6736	Atlantic x (Clinton ² -Santa Fe)	56.4
6905	Ballard Selection 45-34	81.0
947	Tech	71.3
1815	Appler	42.1
708	Fulghum	43.9
6906	Victorgrain 48-93 B.R.S. #54 Coker	55.3
6907	Santa Fe x (Stanton-Fulgrain);Coker 53-13	56.2
6908	(Arlington x Delair) x Trispermia;Coker 53-29	43.6

1/ There was 100 o/o survival at Stuttgart, Ark.; Experiment, Ga.; Hopkinsville, Ky.; Holly Springs, State College, and Stoneville, Miss.; Moro, Oreg.; Blackville, Chester, Clemson, and Hartsville, S. C.; Columbia and Jackson, Tenn.; Blacksburg, Va.; and Wardsville, W. Va. All entries winterkilled at Waynesville, N. C., and Staunton, Va.

ALASKA

Golden Rain, in addition to all of the entries in the Uniform Northwestern States Oat Experiment, was grown at Fairbanks and Palmer, Alaska, in 1954. Data were received from both stations and are reported in Table 87.

Yield, Bushels per Acre

Yields of oats at Fairbanks were slightly below, and at Palmer, higher than those produced in some previous years at these stations. The late maturing tall oats again produced very high yields.

The average of the two stations indicate that Improved Garry, a new entry, produced the highest yield, 101.8 bushels per acre, being .7 bushel above Roxton. The highest yielding oats were Improved Garry, Roxton, Exeter, Victory, Bannock, Simcoe, and Rodney, which varied from 101.8 to 90.1 bushels per acre. These seven oats were all higher yielding than Golden Rain check. Overland and Park produced lower yields than any of the other selections from their respective crosses. There is no obvious explanation for this behavior.

The extremely low yields of Clintland, Waubay, Clarion, and Clintafe were less than one-half of those of the highest producing varieties.

Test Weight

The test weights in 1954 were slightly higher than those of the previous year. Victory (45.5 pounds per bushel) was the heaviest oat at Fairbanks, and Improved Garry tested 40.2 pounds per bushel, at Palmer. C. I. 5657 was the lightest oat at Fairbanks, and Carleton, at Palmer. The Golden Rain check test weight was only slightly below those of the best entries.

Plant Height

Oats grew taller at Palmer in 1954 than in some previous years; however, the 1954 crop at Fairbanks was shorter. Forage is valued greatly in Alaska and makes the tall Canadian varieties, Roxton, Rodney, Improved Garry, and Sauk appear promising for the area.

Standing Ability

C. I. Nos. 5345 and 5346, both Clinton x Overland², had less lodging than other entries at Fairbanks. Park (a sister selection), however, lodged severely. The North Central Region oats, Clintland, Waubay, Clarion, and Clintafe, did not show the strength of straw expected at Fairbanks. They were very good at Palmer, however, as were the selections from Clinton x Overland². Andrew x Clinton (C. I. 5658) and Victory lodged more at Fairbanks and C. I. 5658, Simcoe, and Markton were the weakest strawed oats grown at Palmer.

Date Headed

Oats headed in late June and early July at Fairbanks, while nearly all entries headed in late July at Palmer. All late heading varieties were not high yielding even though the high yielding Roxton, Exeter and Improved Garry were all in the later heading group. It would appear from the lateness of oats developed in Canada and from data from Montana and Alaska that later maturity becomes a very valuable asset as oats are moved farther north.

Date Ripe

Although oats headed earlier at Fairbanks than at Palmer in 1954, ripening was as late as or much later than at Palmer. The varieties producing the highest yields ripened and headed late.

Forage Yields

Much of the oat crop in Alaska is used as forage. Total crop yields in many instances are of more value than grain yields. Roxton and Improved Garry were particularly outstanding in that their forage yields were near the top at both stations and among the highest in the two-station average in 1954.

Table 87. Data on oats in the Uniform Northwestern States Nursery grown on Alaska stations in 1954

C. I. no.	Variety, hybrid or selection	Fairbanks							Palmer							Average Yield 2 stations
		Ave. yield 2 stations	Yield bu./acre	Test weight pounds	Height inches	Logging per cent	Date Head	Date Ripe	Yield bu./acre	Test weight pounds	Height inches	Logging per cent	Date Head	Date Ripe	Yield Forage	
2053	Markton (check)	85.3	91.0	41.5	28	50	6/28	9/8	79.6	36.2	44	38	7/14	8/29	2024	3151.0
3916	Cody	70.2	66.9	42.2	24	46	7/2	8/30	73.6	36.7	35	9	7/17	8/25	1524	2297.0
2592	Bannock	91.1	72.4	43.8	25	46	7/2	9/4	109.8	37.5	43	34	7/18	8/30	2031	2686.5
1145	Victory	91.2	83.4	45.5	27	59	7/1	9/1	99.1	40.0	46	29	7/19	8/30	2061	2679.5
2378	Carleton	69.7	56.9	39.3	24	46	6/27	8/24	82.5	34.7	37	4	7/14	8/27	1286	1943.0
4181	Overland	62.6	52.7	40.8	20	25	7/1	9/3	72.5	39.2	38	15	7/17	8/30	1574	1931.0
3855	(V-R) x Bannock	79.0	63.1	41.2	23	46	7/2	8/30	94.9	36.8	37	12	7/16	8/31	1538	1752.0
4372	Shelby	80.9	62.8	45.3	25	41	7/1	8/31	99.0	39.5	40	12	7/16	8/28	1605	2354.0
4170	Andrew	76.8	66.5	42.5	26	41	6/27	8/26	85.2	36.3	42	34	7/12	8/25	1850	2270.0
4157	Ajax	74.6	66.9	43.7	26	50	6/29	8/26	82.3	37.2	44	25	7/17	8/22	2024	2079.0
5226	Tortune	87.6	80.6	43.3	26	38	7/1	8/30	94.6	37.0	44	21	7/17	8/28	1797	2248.5
5013	Branch	81.7	73.5	42.8	24	38	6/30	8/28	90.0	38.3	44	4	7/18	8/30	1631	2017.5
5345	Clinton x Overland ²	85.2	69.8	43.8	25	21	7/3	8/30	100.6	38.8	41	4	7/17	8/29	2509	2707.5
5346	Clinton x Overland ²	89.9	67.1	43.8	24	21	7/3	8/30	3052	39.2	40	0	7/18	8/30	2594	2823.0
5347	C. I. 4189 x Overland	69.6	59.8	40.5	23	29	7/1	9/5	79.5	39.0	38	0	7/16	8/26	1069	2063.5
5657	Andrew x Clinton	66.1	48.8	37.3	21	29	6/27	8/21	83.5	35.2	37	31	7/14	8/19	1732	2296.0
4988	(VxR)x Columbia Mo. 0-205	65.2	57.8	41.0	25	41	6/27	8/27	72.7	36.0	40	34	7/14	8/26	1030	1898.0
5658	Andrew x Clinton	76.1	56.5	41.0	26	59	6/28	8/27	95.8	37.2	42	41	7/13	8/27	1939	2137.5
6611	Park	59.0	55.5	44.3	28	50	6/27	9/1	62.5	38.0	40	4	7/12	9/1	1480	2072.0
6612	(B-A)x (Iogold x V-R)1/	75.8	61.0	42.3	21	29	7/1	9/3	90.6	38.3	37	12	7/16	8/30	1782	2716.0
6613	C. I. 4189 x Overland	89.2	77.4	43.0	25	34	7/3	9/3	3536	37.8	44	9	7/17	8/31	2221	2878.5
5441	Clinton x Marion	65.7	56.6	42.2	24	41	6/26	8/25	74.8	37.2	38	0	7/13	8/34	1514	2226.0
5869	Clintafe	49.1	32.9	39.3	23	38	6/29	8/26	65.3	36.0	39	6	7/13	8/21	1593	2129.5
3976	Shasta	87.8	96.8	42.5	29	50	7/2	9/4	78.8	35.8	46	25	7/19	9/1	1505	2929.5
4134	Roxton	101.1	101.0	42.8	33	54	7/1	9/6	101.1	36.5	52	15	7/18	8/31	2477	3440.5
4158	Exeter	93.8	86.9	42.7	25	54	7/1	8/26	100.8	38.5	41	9	7/17	8/26	1926	2263.0
5332	Craig	71.6	55.6	40.7	19	25	7/1	8/28	87.6	37.2	32	0	7/16	8/28	1420	1795.0
5647	Clarion	44.5	30.5	41.5	23	41	6/27	8/23	58.5	36.8	37	12	7/10	8/23	1444	1914.0
5946	Sauk	87.5	76.6	43.2	27	41	7/1	9/1	98.5	37.0	40	29	7/16	8/26	1321	2413.5
6661	Rodney	90.1	81.1	44.7	25	34	6/30	9/2	99.1	40.0	44	4	7/17	9/1	2061	2604.5
6701	Clintland	38.2	22.8	43.8	21	41	6/27	8/22	53.6	36.3	36	4	7/13	8/24	2005	2389.5
5440	Waubay	42.2	32.2	41.5	21	38	6/27	8/24	52.2	35.8	36	0	7/11	8/19	1137	2034.5
6767	Simcoe	90.6	73.2	43.4	26	54	6/28	8/28	108.0	37.5	42	41	7/14	8/22	2042	2139.0
6662	Improved Garry	101.8	77.4	43.8	28	50	6/30	8/27	126.2	40.2	42	15	7/16	8/26	2228	2835.0
4794	Golden Rain	88.0	80.8	44.3	27	50	7/1	8/29	95.2	39.8	43	15	7/17	8/27	1839	2564.5

